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Original Articles.

RELATION OF THE PUBLIC SCHOOL TO THE SEMINARY AND COLLEGE AS TO PSYCHOSES.*

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This topic is an important one to the educator and to the parent or guardian of the growing youth of our fair land, America, which claims so justly to be a leader in earthly pursuits. That we are going a little too rapidly toward progression of the mind in these almost too strenuous days of advancement is pretty clear to the thinker or man of larger experience. The result of "wear and tear" on the nervous system must be remembered to be much greater in youths from 14 to 18 years, i. e., during the development of adolescence with its wonderful attendant physiologic, physical and psychic readjustment of the organization. The paper written on this subject must not include as a fundamental basis for study the hardy westerners' children of the plains, nor the country school boy who is forced to healthy physical exercise in his trudging along the country roads, perhaps knee deep in mud or snow; but the overwrought child of the cities. These latter are the object of our attack in the endeavor to retain for them a full component of nervous health—"For with health departing all else flows." The vast majority of youths are educated in the cities where the comforts of home become almost too seductive in many instances, and the precocious boy may entirely eschew physical exertion in his early endeavor toward mental culture. We shall try to speak, therefore, for this vast majority, purposely leaving out of the consideration study of the extremes, i. e., the robust individual under more normal mental and physical surroundings and the extremely delicate child, on the other hand; also the more distinctly neurotic type. It would not be fair in such a discussion to-day to include any of these classes. It is after all a most difficult subject you have selected for discussion.

It has been my experience in observing the average American boy or girl who passes from the city grammar school to high school and finally to the academy or college that there is a wide variance in the methods of instruction, brought about largely in many instances by the idiosyncrasy, say, of a school board or board of trustees, no doubt due to their peculiar ideas of and efforts to teach the student by some special method which seems to the said bodies recited to be the most productive of best results in educatory lines. Of course, this *modus operandi* is carried out in detail by the many teachers who are instructed in the same methods. Thus the widespread good or ill that may result! In these days of rapid advance, we repeat, there is apt to be too much stress laid on particular methods of instruction, which is the old story of specialism becoming lopsided and too pedantic. Of course, the greatest trouble lies in the fact that growing youths are often put to tasks which their brains can never compass; and a great many times psychoses in children and early adult life can be laid at the feet of the general practitioner who did not prove the wise guard he should be through advisory measures to parents, where a child is becoming nervous from misdirected instruction and overwork of the nervous system. The medical profession must, therefore, be awakened more keenly to its ultimate duties to the civic throng if highest common-sense methods of instruction are ever to prevail toward training the individual to be the most useful member of society.

The average child, I am sure, is forced too much at his work even in grammar schools among public institutions; and, from the neurologist's standpoint, I am convinced that such children in the cities would do better to have one session in school than be compelled to rush to a midday meal often of indifferent quality, then to go back again within an hour to recitation, which necessarily requires the freest circulation in that important organ, the brain, to the great detriment of digestion which is, of course, ill carried on under such abnormal circumstances. One-half of the general aches and pains, including headaches, are due to disturbance of metabolism from these various causes in which correction of the eyes by refraction can only in part relieve. Better be that the child have superabundance of fresh air and physical exercise than a doubtful mental advancement, as it is when associated with a nervous, disabled constitution. As remedial measures, I could especially hope that in the high schools of the country at least this régime might be carried out; or a second session, if held, be devoted to classes in natural history, or probably to modified physical gymnastics. As to this latter, I wish to sound a word of caution, since the zealous physical instructors in all educational institutions have, in my experience, been led through too narrow specialism into the error again of overwork of muscles, which the physiologist knows will weaken or finally exhaust the central nervous system; if it does not, indeed, as in some instances I know very well of, produce physical disability such as a dilated or irritable heart that is much worse than asthenia, the result of primary mental exhaustion, and more difficult to rightly interpret or cure.

* Read at the Fifty-fourth Annual Session of the American Medical Association, in the Section on Nervous and Mental Diseases, and approved for publication by the Executive Committee: Drs. Richard Dewey, H. A. Tomlinson and F. W. Langdon.

We believe that there is less of overwork (and, therefore, less hysteria, neurasthenia, accompanying melancholias, delusional insanities, particularly in the class of which we speak) in academies and preparatory schools than there is in the high schools, or even in the college, the place of advanced training, to which we have referred above; although the danger is patent enough in all educational institutions. This disproportion of wear and tear is due to the fact that the academy and preparatory school are ministered over by those who have not so much at heart competition in class work for their institutions; and that many of them are in suburban districts, where the youth from the cities are inspired by the open air and pastoral surroundings, as well as invigorated by the same natural exercises thus invitingly placed before them. It is much more difficult, as I can cite cases to support, for the average student to pass from the high school to college than for the academically trained boy or girl to take up lines of instruction in the college. And this is the result of overwrought nervous systems by the greater urging to work with too little play, which will frequently "make Jack a dull boy" indeed; and sometimes a neuropathic product, a hysteric, or a case of hebephrenia, or some other form of mental alienation.

The object of writing this paper has been not to give you intricate details of what subjects are pushed too rapidly on the growing youth, who has so many demands on his time, but the endeavor has been made to enforce what I feel to be a certain truth from observation through practicing neurology; i. e., that students of the United States generally (particularly those who are slightly below par physically and, in consequence, of lower nerve tone) are much overwrought. The essential point of this contribution, therefore, that I wish to impress is that we, as practitioners of medicine, desiring to keep the community well of all ailments, must assume greater responsibility in civic affairs if for no other reason than to conserve the public health—the excuse and reason for our existence. If the physician will (knowing as he does well enough these facts of overwork of children, the cause of hysteria, melancholia and the more frank insanities at times) deign to become a missionary to the good cause, in the only way that can be of avail for right methods, he will join with the intelligent educators and interested people in the community in which he resides, volunteering his opinion through public lectures before civic clubs and the like, which are doing so much universal good and for which credit must be given to intelligent womanhood. As long as the physician withholds his active influence in these matters, believing he has no legitimate place outside of prescribing, so long will a large burden of the blame for existing conditions be laid at his feet.

I will not detain you with more than these remarks, feeling that in them, from my standpoint at least, the germ of the matter has been recognized. We shall hope that in the discussion ways and means will be suggested by those more competent; and that the result of the symposium will make for proper correction of present-day methods of education of youth.

Habitual Epistaxis.—In habitual epistaxis, without regard to the cause, the frequency of the attacks, or their severity, Woodward says ammonium carbonate is an absolute specific. Two grains every ten minutes will stop the flow quickly during the attack. To correct the tendency and overcome the habit, 2 grains should be given from three to six times each day.—*Medical Summary.*

BEST METHODS OF COUNTERACTING PSYCHOSES DUE TO THE STRAIN AND STRESS INCIDENT TO OUR PUBLIC SCHOOL METHODS.*

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A matter so important as the education and development of children calls for the highest intelligence and wisdom of mankind. It is so vital to the welfare of the race that no one profession can arrogate to itself the right of exclusive control or dictation as to the methods to be employed. The object sought should have the benefit of the combined wisdom and experience of all professions which have anything of value to contribute from their discoveries that has a bearing on the subject.

The members of the medical profession justly and rightly consider that on them rests the responsibility of searching out the causes of diseases of whatever sort, mental as well as physical, and of directing the attention of the public to the appropriate means for their prevention, and it is a healthful sign of vigorous activity and normal advancement of the work of that profession when its members are found interesting themselves in tracing causes to their fountain head, where effective healing or preventive measures are alone possible, and not waiting until such time as the damage is done and curative means are unavailing, and energy and enthusiasm are expended hopelessly. This is commendable zeal on the part of the members of the medical profession and unselfish devotion to duty, and the thoughtful person can not fail to recognize in it the exercise of the highest function of the healing art—the prevention of all abnormality.

But in bringing our medical experience and methods of observation to bear on questions which do not lie directly or wholly within their sphere, but rightly belong to a profession whose members must be credited with equal intelligence and quite as earnest devotion to their peculiar work, we must guard against overstepping the bounds of legitimate criticism and keep strictly within the limits where our training and experience justify us in speaking with authority. The very importance of the subject of education and its methods demands that we apply to it our most exact methods of research and see to it that our conclusions are drawn from unassailable premises. In considering, therefore, the special subject at present under discussion it is for us to determine first what, if any, are "the psychoses which result from the strain and stress of public school methods."

As far as I have been able to discover from the sources of information accessible by me, and in the time at my disposal since this topic was assigned to me, no reliable data are extant bearing directly on the subject. Eight years ago Dr. Alfred Spitzner of Leipsic declared in a carefully prepared and learned article: "As far as I know, there is no such thing as a comprehensive, officially organized investigation and compilation of facts referring to the existence and cause of nervousness among school children." And still more recently (Dec. 16, 1901) Dr. Edward M. Hartwell, secretary of the Boston Statistics Department, said in a paper read before the Boston Society for Medical Improvement: "So far as I can learn, the only states in which thorough-

* Read at the Fifty-fourth Annual Session of the American Medical Association, in the Section on Nervous and Mental Diseases, and approved for publication by the Executive Committee: Drs. Richard Dewey, H. A. Tomlinson and F. W. Langdon.

going, scientific investigations of the effects of school life on the school population have been made are Sweden and Denmark." In these countries commissioners were appointed ten or twelve years ago who made investigations and reports abounding in most instructive statistical tables and valuable information as to the results of certain educational methods, but these reports contained little that had any bearing on the subject of this discussion.

Within the past year a special committee has been appointed by the British Association for the Advancement of Science "to consider the condition of health essential to carry on the work of instruction in schools," and this committee has undertaken to collect information as follows:

1. Records of original observations on the periods of day appropriate for different studies, the length of lessons, and the period of study suitable for children of different ages.

2. On anthropometric forms in use in various schools with a view to preparing a typical form for general use.

3. On anthropometric and physiologic observations recorded in different schools for a series of years on the same children.

4. Recorded investigations into the causes of defective eyesight in school children, and a definition of the conditions necessary for preserving the sight.

5. An inquiry into the practical knowledge of hygiene possessed by school teachers.

It would seem from the statements of these persons who are in a position to know what has been done in this line of investigation, and from what is being attempted, but not yet accomplished, in the way of gathering facts by one of the ablest bodies of scientific men in existence, that while the need of exact information on this subject is beginning to be very generally felt, yet it is an acknowledgment that, so far, no exact information is at hand such as is necessary to locate causes and serve as a basis to institute reforms, if any are needed.

Public school methods can not be justly charged with either the development or aggravation of psychoses in the children subjected to them until we can eliminate as causative factors: 1, Conditions that antedated the school period and its influences on the child, and, 2, such causes as may be operating on the child outside of school hours and school environment.

Assuming that psychoses can be demonstrated to exist among school children and that nervous affections increase in proportion to the time spent under school conditions, as is claimed by many, obviously the school methods can not justly be held responsible for the entire result when the causative factors entering into the problem are so many and so various. We must here, as in all attempts at exact analysis, devise some method by which each causative factor can be discovered and its relative value in effecting the result be properly estimated.

As to the fact of the existence of psychoses among school children sufficient reliable testimony is furnished us. While no systematic and authoritatively organized effort has been made to determine this in any quarter, sporadic attempts by medical men of unquestioned integrity and ability have been made in many places in recent years which have furnished evidence sufficient to show beyond all question that both physical and mental abnormalities exist among school children.

Among the physical defects to which attention has been more especially directed and careful investigations made by physicians are the abnormalities of the special senses, chiefly those of sight and hearing, since these are the main avenues by which the world of sense finds entrance to the world of mind. "All the raw material of thought comes through the senses. All the raw material acted on by memory, imagination, judgment, comparison and reasoning is gained through sense experiences." It is of primary importance, therefore, to a correct and symmetrical development of all the mental faculties that the sense mechanism furnished for the transmission of this raw material be in perfect working order, so that it may honestly deliver to the mind for its use every attribute which the world of things possesses which can through sense perception be apprehended.

Tests for the detection of defects in vision have reached such a degree of accuracy and are so convenient in application that they have afforded the most ready means of examining school children as to the integrity of sense perception. The relatively greater importance of this special sense as compared with others in the acquirement of accurate knowledge of external things likewise renders it well fitted to demonstrate the need of attention to these physical channels which furnish the pabulum for educational development. For while to none of the other senses has the same amount of attention been directed in these investigations, it is safe to assume that when the searchlight of scientific observation is brought to bear on them their integrity will be of no higher order than that which has been shown for the sense of sight. Dr. Wright,[1] health officer of New Haven, Conn., makes the statement that "it has been found by the examination of the eyes of many thousand children in the high schools of Europe that over 40 per cent. were nearsighted to a greater or less extent. It was also found that the defect increased from the primary to the higher grades not only in frequency but in degree."

Dr. Jane Kelly Sabine[2] of Boston gives as a result of observations made on 2,000 girls in schools and colleges of New England, among whom 30 per cent. were either wearing glasses or were ordered to have their eyes examined by a specialist, that there were 6 per cent. with defective hearing, 5 per cent. with weak lungs, 4 per cent. with heart trouble, 75 per cent. with menstrual troubles and 90 per cent. with leucorrhea.

Dr. G. B. Saunders of New Zealand,[3] in an elaborate report of investigations made by him and others on the vision of school children, concludes: "It has been clearly established by the evidence set forth from these statistics that defective vision is induced during the whole period of school life and that children entering school with healthy eyes have developed faulty vision, and that the proportionate number of the scholars affected increases as we ascend in the classes and also in the grade of the school."

While I am disposed to question the assertion of Dr. Saunders that these children, or any number of them, had "healthy" eyes at the time they entered school, since no evidence was given that examination of these children on beginning school was made, yet the fact remains—and abundant testimony other than this I have

1. Boston Med. and Surg. Jour., March 27, 1902.

2. Paper before the Society for Medical Improvement, Dec. 16, 1901.

3. London Lancet, Jan. 11, 1902.

offered can be furnished in support of it—that the eyesight of from one-fourth to one-third of all school children is defective, and, moreover, such defect has in many instances been brought to the knowledge of both teacher and parent for the first time by these inspections instituted by physicians.

Whether or not the production of this large percentage of cases of impaired vision can in any measure be charged to school methods or defective school hygiene must, I think, for the present, be left an open question. It is for the present sufficient, perhaps, for us to know that such a large share of school children at an early age are handicapped by serious deficiencies in the mechanism of one of the most important senses through which knowledge is acquired, and that often such deficiencies remain unrecognized and uncorrected, as far as such correction is possible, by both parent and teacher.

Now, it is needless for me to recall the fact that eyestrain is one of the quickest and surest means for bringing about brain exhaustion and mental fatigue and that out of the fruitful soil of mental fatigue all manner of psychoneuroses spring up. What would appear, and in reality be, a very simple task to a child healthy in every organ, might in one with defective vision produce a strain and stress that would cause an unhealthful drain on the entire store of nerve energy and so result in disorder of normal function in certain of the more susceptible parts. It is not surprising, therefore, to find many children who are victims of visual defects unable to bear the strain of ordinary school requirements, without manifesting signs of neurasthenia, hysteria, or some form of mental or motor instability, or both, the fault lying in the vulnerability of the child and not in the school method. But investigation seems to show also that the constant demand made on the sense of sight by the confinement of school methods of instruction to the printed page as a source of information has resulted in a still further deterioration of this sense organ, as is seen from the greater degree of myopia, as well as the increase in relative frequency of this as of other visual defects, among pupils in the higher grades. If it can be shown that the healthy and normal eye is caused to deteriorate by excessive use or strain due to school requirements, and, further, that the same educational results could be attained by informing the mind through some other avenue of approach, as the ear, the touch or the muscular sense, we would then be justified in finding fault with the method which throws undue labor on an important organ, not only to its injury but to the injury of the organism as a whole. Therefore, no matter what the outcome is in the way of nervous or mental manifestations of an abnormal kind in school children with demonstrable physical defects, unless it can be shown that such physical defects and their consequent nervous disorders are either caused, or are unnecessarily aggravated, by the school methods employed, it must be assumed that the neuroses and psychoses accompanying them would have developed in spite of school methods or under any circumstance where the same demands would have been made on the organism with a view of securing the educational result desired.

There are conditions existing in many school rooms which are injurious to the eyesight aside from the prolonged and, perhaps, unnecessary confinement to the printed page. Dim or misdirected light, the distance of the pupil from the visual demonstration on the blackboard, defective ventilation and temperature of the room are causes which may contribute very considerably to the strain produced not only on this sense alone but on the nervous system as a whole. But these are matters of school hygiene which, although they have an important bearing in causing the effects we are considering, do not properly enter into the plan of this discussion. It has been seen that the special sense strain is very generally recognized as a fruitful source of mental fatigue and consequently of the various pyschoneuroses that accompany this state or stand as the evidences of it.

Next to this as a causative physical factor in bringing about a reduction of nerve energy in girls must be placed the disorders of menstruation and an unhealthful state of the generative organs. The very large percentage of menstrual troubles and of leucorrhea reported by Dr. Sabine as present in the 2,000 girls from whom her statistics were gathered, directs attention to a most significant fact. My experience for more than a quarter of a century in caring for and observing the health of a large number of college girls gives emphasis to this as a causative factor in the development of psychoneuroses among school girls. While the inflexibility of school requirements must act as one of the factors in maintaining and, perhaps, in creating this unhealthful physical state among our girls in some instances, yet we are well aware that there are many more potent causes such as unsuitable dress, social excesses, indiscretions in diet, neglect of sleep and of the bodily needs, contributing to the result to a much greater degree.

Could the teacher understand the nature and signs of the extra physical strain to which so large a per cent. of the female pupils are periodically subjected, and was she free to temper the demands of the curriculum to meet the condition, much injury would be avoided. But here again, as in the case of defective eyesight, the responsibility for the result produced on the nervous system must be shared by the parents, the guardians and the pupils themselves, and not charged wholly to the teacher's account or assumed to be due to a faulty school method.

There is another phase of this problem which is deserving of much more serious and systematic attention, both from the teacher and the physician, than it has hitherto received, and that is the natural evolution of the child mind and the stages at which certain capacities are most active and vigorous and capable of performing their function with the least friction and expenditure of nerve force.

It is here, in my opinion, that our pedagogic methods in this country are most open to just criticism, since the proper adjustment of studies, the proper period of the day for each and the length of time they should occupy, are questions which a scientific pedagogy should have long since settled beyond all controversy.

It ought not to require the physician to call the attention of the teacher to the fact that nature study, which engages sense perception, creates interest, attention and enthusiasm, naturally precedes, in a well-arranged curriculum, the relation of numbers and comparison of abstract attributes. In other words, that the acquisitions by the senses must lay a broad and deep foundation before the moral and reasoning faculties can properly evolve, and, moreover, that a child possesses avenues for sense perception other than those of sight and hearing, mainly those of touch and muscle sense, which have a value quite equal to either of the former in creating mental stability, though that value is supplementary, and not substitutive.

It should long since have been established beyond all question by teachers that the acquisition of language is an early capacity of the child mind, the naming of things being only secondary to their apprehension by the senses, and that thoughts concerning things must have the language symbols as a necessary foundation for the expression of those thoughts or even of clear conceptions concerning them. When we look abroad from this point of view—of the natural evolution of the child mind—over the school methods that are in operation we find them still in a chaotic state, "without form and void." No settled principles appear to have been evolved as to the natural order of studies after centuries of our best thought have been devoted to the solution of the problems of education.

And yet every observing teacher has had the evidence daily before her that a course of study must be in harmony with these processes of development in order to be successful.

More depends on the order of studies assigned than on the contents of the studies themselves. You have heard of the experiment made some years ago by four teachers in the city of Paris, in a school for boys (the Lycée). They asked permission of the Minister of Education that each of them might give to his 25 pupils the same studies prescribed in the required course, but in a different order, an order believed by them to accord with the natural development of a boy's mind rather than in the arbitrary order hitherto demanded. "These boys completed all the required studies in this natural order in three and a half years, instead of seven years, the time assigned for the completion of the course as regularly given. On examination, they were found to be equally proficient mentally, and above the average in physical development, as compared with those who had spent seven years in going over the same ground." This one striking illustration furnishes convincing proof that the study of the natural history of the child, the manner and order of its physical and mental unfolding, is an indispensable prerequisite to the right exercise of a teacher's functions.

Periods of study too prolonged and a disregard of the vital waves of alertness and acquisitive capacity, which are likewise faults that can now be justly charged to the account of the school methods in many places, and which operate in no small degree as mental irritants and mental worries would, by a better understanding of the immature stages of childhood, be corrected.

I can but sum up the thought I have attempted to present to you on this phase of my subject by quoting the words of Herbert Spencer: "What with perceptions unnaturally dulled by early thwartings and a coerced attention to books; what with the mental confusion produced by teaching subjects before they can be understood, and in each of them giving generalizations before the facts of which these are the generalizations; what with making the pupil a mere passive recipient of other's ideas and not leading him to be an active inquirer; and what with taxing the mind to excess, there are few minds so efficient as they might be."

In the light of these considerations, it is evident that the end, which we, as physicians, seek—the arrest of such causes as lead to the mental and nerve irritability and physical weakness which we observe in school children—must have a plan of correction sufficiently comprehensive.

We need to know more of the child before it is subjected to public school conditions and more of the influences that attend it outside of school hours. Only by having such knowledge can we properly estimate the effects of school conditions for good or evil.

In attempting to formulate a plan for the removal of the physical and mental defects we have observed, I would suggest:

1. A careful medical inspection of school children at the beginning of their school life and at stated intervals thereafter, covering both their physical and mental capacities.

2. All teachers should be well instructed in the physiology and psychology of the child and in the principles of school hygiene.

3. School buildings and their environments should be made to comply with all the requirements of modern school hygiene, as to light, pure air, temperature, seating, decorations, play ground facilities, etc.

4. The curriculum should be so flexible as to allow more opportunity for the exercise of the individual judgment of the teacher, as to the best method to adopt for each child in order to secure for it the greatest educational value, and the curriculum should include facilities for appealing to the mental faculties along every sensory pathway, among which facilities I would mention nature study, rational kindergarten, manual training and physical exercise.

5. The number of pupils assigned to any one teacher should be only such as she can care for to the best advantage. Time should be allowed the teacher for a careful study of the physical and mental needs of each pupil.

6. A closer relationship between the parent and teacher, with a view of securing the end sought—the highest and most useful development of the child.

7. The removal, as far as possible, of all conditions within or without the school room that interfere with the accomplishment of this purpose.

DISCUSSION

ON THE PAPERS OF DRS. PEARCE AND HERDMAN.

DR. HAROLD N. MOYER, Chicago—Before this Section, three years ago, I presented a paper on the psychoses of chorea. In 8 out of 10 cases there was a psychosis—not that the children were demented or incoherent, but there was a distinct alteration in the mental condition of the child during the continuance of the chorea. What is true of chorea is true of many children's diseases, both of the nervous system and of the nutritional disorders which are so common in infancy. The psychoses of children is a much-neglected subject, meaning by this the minor, less accentuated deviations from the normal, and not what is commonly termed insanity. The psychoses of childhood are not incidental to any great extent to school strain or to any strain, but they are due to the developmental period, *per se*, primary defects in the nutritional processes in early life and a bad heredity.

Is strain a bad thing? Is the use of an organ, whether it be the brain, or the heart, or the lungs, or the stomach, a bad thing for that organ? I am distinctly of the opinion that it is not. I believe that the use of organs strengthens them, and that the only way organs are strengthened is by use; but we must stop short of strain. Is the early breakdown of the athlete due to strain? Is it not due to the fact that there is a maladjustment of certain organs? He has developed organs which are no longer needed, and when he passes the age of youth, those organs tend to atrophy and decay when the strain is no longer put on them. After all, we get down to the nutritional factor, which teaches that we should put such an amount of work on an organ as it will stand, and lead to its development, and that will not carry it beyond a point that will be needed afterward. That is an underlying

principle of pedagogy. The supplemental factors—the defects in the nose, throat, eyes, etc, with which the child may be handicapped—are the individual pecularities of cases and must be eliminated. The common factor is nutrition, the strengthening of the organs by proper use, to secure a symmetrical development. The development of the nervous system at the expense of the muscular and vegetative systems is a fault of modern methods of education, but it is being rapidly corrected. We must not fall into the opposite extreme and neglect the nervous system, remembering that the use of an organ strengthens and develops it.

DR. JOHN PUNTON, Kansas City—The medical profession should take a more active part in the regulation of the methods of public school education. There is great need of a consensus of medical opinion, but nothing of a tangible character has been done. About ten years ago I suggested that every large city should maintain a board of medical inspectors. A year or two later the first board of this kind was appointed in Boston, and later other cities followed suit. In spite of that there are many cities that have failed to give even so much recognition to the subject. Three or four years ago I read a paper before the American Neurological Association, desiring to get them interested, but unfortunately nothing was done. It has been proved by the medical school inspectors that anthropometric measurements show a physical basis for precocity on one hand and for mental dulness on the other. If we could introduce this system in all schools it seems to me that hysteria and other neuroses could, in many cases, be prevented. Along those lines the present system of medical inspection is lame. Certain definite standards of weights and measures would be of vast importance. It is now usually taken for granted that like age implies like mental capacity, which is a wrong criterion, because mental development occurs in different degrees at different ages in different individuals, and as the public schools deal with all classes of children this standard is very misleading. I do not think, however, that the public school methods are altogether to blame for the nervous diseases. The child's home life has much to do with it, and very often the parents are more to blame than the teachers. Very often the teachers are to blame independent of the methods which are enforced by the educational system of the city; for instance, when children have fallen behind in their studies the teacher will sometimes give private instruction, and parents are often very anxious to have her do so, because they do not wish their children to be put back or to fail of promotion. I think such a teacher deserves severe criticism. I also find that some teachers, to stimulate the best efforts, will offer prizes for those who stand highest in examinations. That is a wrong method; it puts a severe mental strain on all the children, whether they win the coveted prize or not. The defects among public school children can be classified into physical and mental. The former may give rise to very serious misunderstanding. Some physical defects pertain to the bony structure and sometimes militate against nutritional growth. We must set a definite standard by which we can separate the normal child from the abnormal. There are differences of degree and kind from the normal child up to the precocious and down to the worst dullard, and physically we also have all types. All such defects have some influence on the development of the child, and it seems to me that the medical aspect of school education must be worked out along this line by the medical profession. Now that this Section has taken up the subject, I hope that something will be done in a tangible way, so that the public can get a consensus of medical opinion.

DR. J. H. MCBRIDE, Pasadena, Cal.—Some years ago Dr. Porter, now professor of physiology in Harvard, made some very interesting investigations into the health of 35,000, I think, school children of St. Louis. He discussed one element of the problem under "The Physical Basis of Precocity and Dulness in Relation to Sex and Age." He found that the children who were taller and heavier were the brighter children; that the dull children were shorter and weighed less. Dr. Byers, a surgeon in the Navy and formerly at the Annapolis Academy, found that by special training he could make students grow taller than the average. He claimed to be able to add an inch to the height of a person between the years of 16 and 20. It is an important fact in the economy of child life that the physical development is directly related to the mental development. Other things being equal, the man who has well-drilled muscles and a thoroughly developed body will be a smarter man because of it. Much of the so-called overstudy of school children and the overwork of men is not properly overwork or overstudy. It is due to unhygienic living. If people would live as they ought, eat, sleep and exercise wisely, there is little danger of harm from any amount of work they can do. The worst fault of our public schools is the lack of gymnasiums and manual training. We need both badly. We have forgotten the body in our fussy anxiety about the mind. President Jordan of Stanford University has informed me that the students there improve in health during their stay in college. The physical life of the students is carefully attended to.

DR. R. C. MOORE, Omaha—Little children of 5 years and even younger are sent to the kindergarten, where for hours they are confined to the house, placed under restraint and curbed in their childish plays. This is all wrong. We can go to the dumb animals and learn a good lesson in this regard. The cat in her spare time plays with her kittens; not so much to amuse as to develop them. The same is true of birds. Let the children spend their time out of doors; let them play in the mud until they reach the age of 7 or 8. Then they will become better scholars and make more rapid progress than those who enter the race at an earlier age. I think the municipality owes to every child a good, common school education, and there the responsibility ceases. The high-school system is top-heavy, and it is there, I believe, that the greatest injury is done to the students. They pass through the earlier grades, even through the seventh and eighth, without much trouble, but when it comes to the high school the forcing process begins, and the constant effort to keep up in their studies proves detrimental to many students.

DR. ALBERT E. STERNE, Indianapolis—One important factor that has been overlooked is that of overcrowding, both in our cities and in our schools. It has been claimed that myopia is a cause of mental strain, and *vice versa*, that mental strain causes the myopia. We are losing sight of the fact that the school period is the growing period, or the evolutionary period, both physical and mental, and to my mind certain psychologic or neurotic manifestations are associated with that period. Even the healthy child has certain fancies. The out-and-out psychoses are not common in childhood. None of us see many cases of adolescent insanity; but during this peculiar period erratic or even erotic manifestations are not uncommon.

DR. DANIEL R. BROWER, Chicago—I trust we will go from here prepared to work along the lines specified. I am sure that I have, during the past few years, seen twice as many cases of insanity among adolescents as I formerly saw. A few years ago this matter was brought forcibly to my attention. I had on my clientele the president of the Chicago Board of Education, who was himself an athlete; we had numerous conversations on this subject, and he and I evolved this system, which for a time was put in practice with considerable success: Between each recitation, ten minutes were allowed for rest and exercise, which consisted of light gymnastics or play. Subsequently, objection was made to the plan, and with political changes it was discontinued entirely.

DR. D. L. WILKINSON, Montevallo, Ala.—I will report briefly the results of my investigation during six years of more than 2,000 cases. A necessity for this work arose in my observation in 1898 that at least one girl in every twenty-five in the Alabama Girls' Industrial School was compelled to abandon her work on account of ill health—I may say here that the number of girls who are compelled to abandon college work varies from 4 to at least 50 per cent. I began work along original lines, devising a ledger for the purpose, in which I kept a complete family and personal history of every matriculate. In Ledger 2 I recorded the physical condition at the beginning and close of each session. The former

information was ascertained by my assistant, a young lady, and the latter by the physical culture instructress. The trouble with our educators is that they demand the work of maturity where maturity does not exist. The curriculum is inflexible; pupils are considered as massed entities, no longer as individuals. The teacher endeavors to accomplish a definite amount of work in a limited amount of time, and strives that each succeeding class shall accomplish more than the preceding. My investigations corroborate findings elsewhere, especially those of Dr. Jane Kelley Sabine, Boston. The average age of the girls I examined was 17; the average weight, 113 pounds; the average height, 5 feet 2.1 inches; 75 per cent. suffered from amenorrhea, menorrhea or dysmenorrhea; including leucorrhea and ovarian neuralgia, 90 per cent. were sufferers; 75 per cent. suffered from tonsillitis; 20 per cent. from myopia, hypermetropia or astigmatism; 30 per cent. from constipation; 40 per cent. from headaches. One point Dr. Sabine brought out that the essayists have not touched on: Sixty per cent. of her 2,000 young ladies had to give up work from one to two days each month. My observations did not cover this point. Ten per cent. of our girls come to us with a direct consumptive heredity, i. e., one or both parents died from tuberculosis, or two or more near relatives; 33 1/3 per cent. come with a poor heredity, where one or both parents or two or more near relatives died from diseases which might be regarded as hereditary; five-sixths come with the history of one or more attacks of some severe acute trouble, such as lobar pneumonia, scarlet fever, diphtheria, chronic malarial poisoning, typhoid fever, etc. These points show the origin of troubles prior to college matriculation. I have fixed the average age of puberty in Alabama at the thirteenth to the fourteenth year, 102 girls more menstruating first at 13 than at 14. This would indicate most trouble in the educational system at or about the time when the girls are prepared for college. In the East, I believe that the severest strain is placed on young women before menstruation begins; in the South it is subsequent and therefore at a time when the bodily growth demands the blood of the body. The brain is approximately one-forty-fifth of the body weight, and demands practically one-seventh of the blood of the body. Forced education, therefore, at or subsequent to the time of puberty withdraws blood which is demanded by the growing uterus and adnexa, and results in an undeveloped uterus and an imperfect discharge of the uterine functions. This forced education, too, leads to flabby muscular development, nervous irritation and an increase in neurasthenia, chorea, hysteria, anemia, cardiopathies, and a total breakdown. Pupils in the school referred to work on an average, mentally, of twelve hours, but our school is better than many others, because every pupil is required to carry at least two industrial branches. Now, as to the remedy, educate the teachers to seeing the necessity of the pupils for more rest, interspersed with suitable exercise. Educate the pupils as to the importance of the subject, and in a few generations you will have the parents educated to the point that they will demand a rational plan of education for their children. In Alabama we hope soon to forward to all superintendents of schools and teachers in the state, through the State Board of Health, a circular calling attention to such defects as exist, and requesting the co-operation of the teaching profession in the removal of these difficulties. We are preparing to give special gymnastics in our school to those with developmental defects, and to limit their studies and regulate their habits. I propose to put a circular in each girl's hand, telling her what she may do to develop herself while in school, and what she should do if there is a tendency to any particular trouble. I call your attention to the work now being done in Boston, Chicago, Washington and elsewhere under many able men. I have a third article on this subject now in press, and will be glad to furnish a copy on application.

Dr. Wharton Sinkler, Philadelphia—In the majority of cases very little care is taken of children outside of school hours. The parents are usually occupied with their own affairs, and most of them are untrained in the proper bringing up of children, and so the latter have their own way most of the time. In our large northern cities, during the winter months, the days are so short that the children can not spend many hours out of doors, and must remain in badly lighted, badly ventilated rooms. Any one who sees many of these children at the neurology clinics will find that their home life is anything but what it should be. They are permitted to drink tea and coffee, even to excess; they are overfed with sweets and their time is not profitably employed. We should bear in mind that fault rests not only with teachers but with parents.

Dr. D. I. Wolfstein, Cincinnati—There is no particular danger to the growing child as the result of overwork. We need no better illustration of that than the methods of training children in Germany. A graduate of the ordinary German gymnasium course at 16 has received as complete and strenuous an education as a student in his first or second year at Harvard. To enable a German student to complete his service in the army in one year he must pass an exceedingly difficult examination, and when he presents himself for this examination he can not be regarded as a victim of nervous debility. The reason for this is that the Germans are firm believers in combining intellectual work with physical training. In their numerous *Turn-Vereins* the education of the muscles keeps pace with the education of the mind in the schools. The average country boy learns quicker than the city boy and makes more rapid progress in his studies because he has had the advantage of muscular training and plenty of outdoor exercise.

Dr. A. J. Pressey, Cleveland, Ohio—There is one individual who has not been censured by any of the speakers, and who I believe is responsible for a great many of the drawbacks of our public school system: He is the superintendent. He has usually obtained his position through political preferment, and feels that he must do something for the school, which usually consists in making some addition to the curriculum. Instead of making the work of the children lighter, he usually adds to it with the idea that this will add to his popularity. Another objection to the public school system is that the rules are too inflexible and ironclad. Both of my children were deprived of the benefits of graduating from our high school because they were not strong enough to endure the required amount of work in the prescribed time. If they could have taken a year or two longer to have performed the same labor they could have accomplished it without harm to themselves.

I do not think eyestrain is as much the fault of the school room as it is of the environment. In the city the eye does not get the freedom that it does in the country; there are too many brick walls in the way, which prevent us from using our eyes as God intended them to be used. I do not know whether that theory is correct, but I believe it has much to do with the fact that wearing glasses is very common among city children and comparatively infrequent among children in the country. I do not know how a remedy could be offered for this.

Dr. C. C. Hersman, Pittsburg, Pa.—If we all lived in the country the subject would probably not have arisen. Among savage races the survival of the fittest was the rule of life, but in civilized countries the weakling is taken care of and brought up. The appointment of medical school inspectors is a step in the right direction, but they usually owe their position to political influence and serve their masters rather than the public. The average kindergarten I regard as an abomination. Very young children are sent there to get them out of their parents' way, and the mental condition of the child is developed far ahead of the physical, if the child is inclined to be top-heavy. Such a method of training can only do injury. If I were the father of as many children as old Priam I would not send any of them to school before they were 7 or 8 years old. I have seen children who were not sent to school until they were 8 years old, and within three years they were up to and sometimes far in advance of those who had started at the age of 5 or 6.

Dr. E. T. Shelley, Atchison, Kan.—A great deal of harm that is attributed to school life should rightly be laid to

faulty home life. Parents need education as much as teachers. One element of harm, especially in our smaller cities, is the music lesson fad. After returning from school, worn out and nervous, the girl must take her music lesson. After she has attained a certain degree of proficiency the ambitious music teacher has a public recital where the younger pupils, in a fright and nervous strain, fumble over the keyboard of a piano to the evident delight of foolish and fatuous parents. Another real evil is, I believe, the system of inelastic grading prevalent in nearly all city schools, where young children of greatly varying mental capacity and development are forced into that unyielding mold called a school grade. Country schools are much less prone to this evil, and the result is that it is the usual thing, in my very limited observation, to find country children, from 8 to 12 years of age, from a half year to a year ahead of town children in their school work, notwithstanding the shorter school term of the country school. At all events, on moving to town they are admitted into relatively higher grades than town children of the same age occupy. Is this due to the fact that they have escaped the stunting effects of an inelastic school curriculum?

DR. J. H. MCBRIDE, Pasadena, Cal.—One of the worst features of our public schools is the forced inactivity of the pupils. It is not only injurious to health, but is absolutely deadening to the mind. There are two very interesting books on education that every physician and teacher should read. One is by Prof. William James, "Talks to Teachers on Psychology and Life Ideals." The other is by Prof. Hanford Henderson on "Education and the Larger Life." I wish a committee might be appointed to investigate the subject of the health of school children.

DR. H. T. PATRICK, Chicago—The average physician is shamefully neglectful of his duty in the instruction of parents and the guidance of children. He treats measles and other infantile ailments with enthusiasm and patience, or at least with submission, and has an insatiable appetite for fractures and operations, but when it comes to getting the child's parents into a corner and telling them what they must do and must not do, he puts on his hat instead and walks out of the house. He is not willing to risk the disfavor of his patients by telling them frankly what he thinks. The German system of mental and physical training is in some respects far superior to ours, but conditions of the two countries are not the same. I am convinced that in Germany they do not begin to live the strenuous life that we do, particularly as regards children and young people. The opportunities for advancement and attainment in this country are so great as to place a very tempting bait before every individual, and this has its influence on the education of children. Every young man who starts in business looks forward to becoming a Napoleon of finance, and every girl who gets into long dresses looks forward to being a brilliant figure in society or in whatever direction her ambition leads her. There is too little of the placid content that we see in Germany, and this has a great influence on the effects of our education. Charcot long ago said that children do not have neurasthenia, and this is true if the child is left to follow his or her inclinations. But children are not left alone; they are given a stiff curriculum in school and music lessons outside; they must take part in recitals; they must know something of French, German and Italian, paint a little and decorate china. They must do everything that their friends do, and do it all a little better. These accomplishments are not only tolerated, but even encouraged by the parents, and the teacher naturally tries to turn out the highest possible product. The greatest sin is committed by the medical man who neglects or purposely avoids his full duty in this matter.

DR. WILLIAM S. LINDSAY, Topeka—We should not attempt to correct all this by changing the present methods of the management of children. The overwork of the parents is shown in the condition of the children. I feel that we have something to do in looking after our own habits and method of living, in order that the coming generation may be better prepared for the strenuous conditions with which they will have to contend.

DR. F. W. LANGDON, Cincinnati—We once had in Cincinnati an old physician, somewhat eccentric, but very successful in his profession, and possessing good, sound common sense. His two daughters, at least one of whom was inclined to be neurotic, on returning from their select private school one day, informed their father that they were to have several new studies added to their curriculum. As they were already overburdened in this respect, the physician called on the preceptress and told her rather forcibly what he thought about it. "Well," she said, "you desire your daughter to have an education?" "Yes, Madame," he responded. "But I also desire her to have some legs and lungs and stomach." Every psychosis is preceded by a neurosis, and we should not wait for a psychosis to develop or threaten before we adopt our preventive measures. The average new school superintendent, who is brought to the city or town to take charge of the schools, thinks he must add something to the curriculum. He never thinks of taking anything off. The ordinary school curriculum is top-heavy and too extensive and as a consequence the hours of study are too long. There is too much memorizing and not enough teaching. The student is not taught to think, but to cram, and that is the fault of the teacher. The remedies I have to suggest are these: 1. Reduce the curriculum in regard to the special, abstract studies. 2. Shorten the hours. 3. Increase the number of teachers in proportion to the number of pupils. A teacher can not take care of 50, 75 or 100 pupils and do justice to them all. We must adapt the curriculum and hours to the ability of the average pupil, and not to that of the highest examples of intellectual development. No one is so quick to listen to the views of public opinion as the politician, and if he does not act as we think he should in this matter, it is because we have been a little tardy in expressing our opinions.

DR. F. SAVARY PEARCE, Philadelphia—The physician too often limits himself to actual medical treatment, and rarely takes the time to give any instructions to parents regarding the value of preventive or hygienic measures. He does not feel called on to take any active part in the discussion of these subjects at public meetings; a very important matter. The consensus of opinion of those who have taken part in this discussion has been clearly enough that the educational methods in this country are open to great improvement, and I trust that some effective measures will be taken by this Section so that the views held can be placed before the public in a brief and succinct form. We hope to be students to our dying day, but the bud must not be neglected.

DR. WILLIAM J. HERDMAN, Ann Arbor, Mich.—This is a topic that has been in the heart of every earnest physician in this country. This is the age of preventive medicine. Our duty is not alone to those who are here, but to those who are to be here in the future. We as neurologists, more than any other class of physicians, fully recognize that a large percentage of the abnormalities with which we have to deal can not be helped by to-day's methods. In many of these cases we can simply give temporary relief, but we know that if we do our full duty to-day we must strive to stem this constant current of disease. The other day we listened to Dr. Crother's excellent paper on the pathologic effects of alcohol. Each one of us, in his daily work, sees the injurious effects of alcoholic stimulants. The neurologist recognizes the utter hopelessness of dealing with chronic alcoholism. We know that it is one of the most fertile causes of disease; that it is filling our almshouses, insane asylums and prisons, and daily increasing the number of feeble-minded, and still, what have we done, as physicians, to declare that fact to the public? We as physicians also know that the prevalence of syphilis is responsible for a very large percentage of diseases that come before us every day. How can you help a case of tabes in its third stage? We must go further back and try to reach the root of the evil. Have we performed our full duty to the public or to posterity if we fail to make ourselves heard on these subjects? I believe we do not sufficiently recognize the fact that we are fulfilling a very small share of our duties in connection with preventive medicine. We all recognize the

fact that education is an important factor in the future welfare of mankind, and we also recognize that neuroses and psychoses may result from faulty school methods, but we are not yet in a position to take definite action regarding the matter. We have not collated the knowledge we have on the subject, and we are not in a position to say that this or that is the best method to adopt. That is something that must be done deliberately and scientifically, and our conclusions must rest on a broad, sound foundation.

THE VOLUNTARY AND INVOLUNTARY BRAIN CENTERS CONTROLLING THE OCULAR MUSCLES.*

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There are two groups of brain centers for controlling the movements of the eyes. One group is found in the cortex, and consists of nine distinct centers. In this group are two more centers, making eleven in all, but these two are connected with muscles within the eye, viz.: the Müller muscle in the ciliary body and the sphincter of the iris, and will not be specifically studied in this paper. The second group is located at the base of the brain, and consists of twelve distinct centers. In this group are four more centers, making sixteen in all, but these four are connected with the muscles within the globe already mentioned, hence they will be passed without further mention.

THE CORTICAL GROUP.

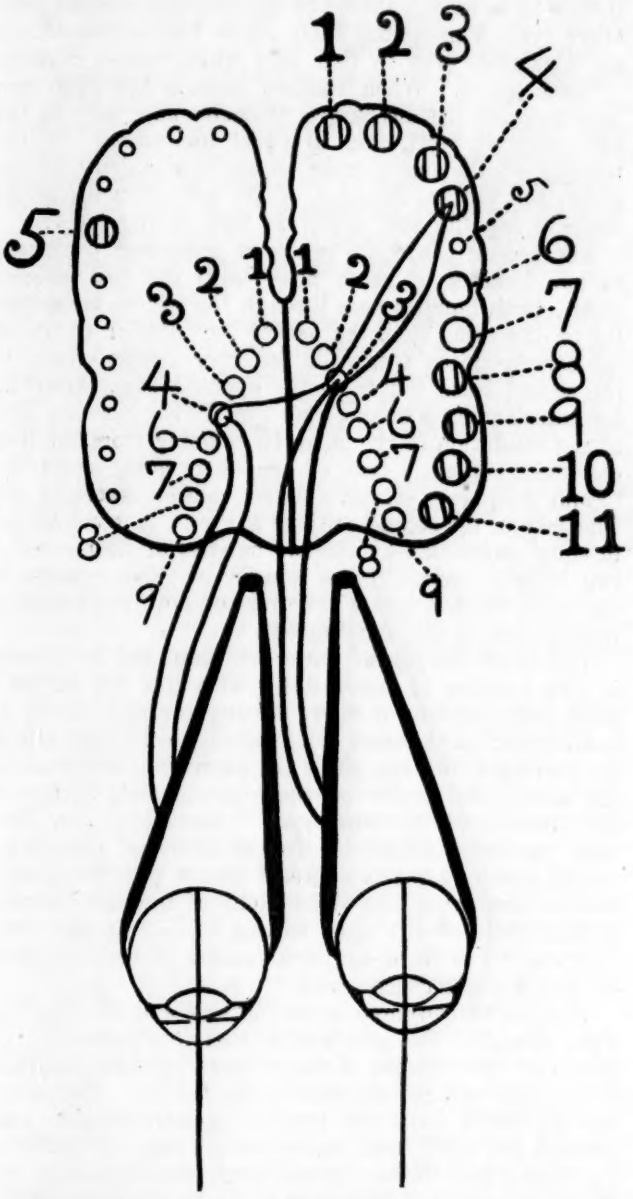
Experimentation and pathology both have given evidence of the existence of the cortical centers. Experimenters on the lower animals have not yet found all the cortical centers to be studied in this paper; nor have any of these centers been very definitely located. These experiments teach us that some of these centers are in the anterior part of the motor area, not far from the outer extremity of the crucial sulcus.[1] Future experimenters, doubtless, will be able to find them all and give to each an exact location.

An irritative disease of the cortex, in the motor area, has caused the two eyes to turn spasmodically toward the opposite side; and destructive disease in the same part has caused a paralytic turning of the two eyes toward the corresponding side. Thus has pathology located both the fourth and fifth conjugate centers in the cortex.

Our chief evidence as to the existence of the cortical centers is physiology—the action of the muscles in moving the eyes. Each of the nine cortical centers is connected with two muscles, one belonging to each eye, thus showing that some of the fibers of each of the motor nerves cross over to the opposite side of the brain. This decussation, it must be confessed, has not yet been fully demonstrated anatomically; but this demonstration will come soon. Cunningham, in his anatomy, teaches more about the decussation of fibers of the motor nerves of the eyes than any one else whom I have consulted, but his interpretation of the crossing is erroneous.

Since the arrangement and exact location of the cortical centers controlling the ocular muscles are unknown, nothing but a schematic representation of them can be made in a cut. The schematic plan is also followed in the cut, in the attempt to show the basal centers, notwithstanding the arrangement and location of these are fairly well understood.

The centers controlling the ocular muscles, whether cortical or basal, are under the mastery of the mind. Volition presides over all the cortical centers that are connected with the recti muscles and over two of the centers connected with the obliques, while the other two centers connected with the obliques are presided over by the fusion faculty of the mind. The basal centers



are all under the mastery of the fusion faculty. Those centers under the control of volition are represented in the cut by circles crossed with parallel lines, while those under the control of the fusion faculty are represented by circles only. All these centers are numbered arbitrarily, but in such a way as to lead to as little confusion as possible. The cortical centers are numbered from 1 to 9 on each side of the brain; but, since only half of these centers are needed for effecting the conjugate movements of the eyes, the other half are supposed to be inactive. The active nine, eight on one side and one on the other, are represented by large circles, while

* Read at the Fifty-fourth Annual Session of the American Medical Association, in the Section on Ophthalmology, and approved for publication by the Executive Committee: Drs. J. A. Lippincott, Frank Allport and John E. Weeks.

1. See Stewart's Physiology, 4th ed., p. 473.

the inactive nine are represented by small circles. The basal centers on each side of the median plane are all represented as equal in size, for the reason that each must stand ready for action whenever an emergency arises.

The first cortical center is connected with two superior recti by means of two bundles of fibers, both bundles passing through the first basal center on the same side, the one to be distributed to the superior rectus of the corresponding eye, while the other bundle of fibers crosses to the first basal center on the opposite side, thence on to be distributed to the superior rectus of the other eye. Throughout their entire course these fibers are insulated, even in that part which passes through a basal center. When volition unlocks the first conjugate center the discharged neuricity goes only to the two superior recti, and in equal quantities. If the tonicity of the one muscle equals the tonicity of the other, the upward rotation of the one eye will be the same in rapidity and extent as that of the other.

The second conjugate center is connected by means of two bundles of nerve fibers with the two inferior recti. Both bundles pass through the second basal center on the same side, the one to the inferior rectus of the corresponding eye, while the other bundle crosses to the second basal center on the opposite side, thence to the inferior rectus of the other eye. What has been said of the insulation of the nerve fibers going from the first conjugate center is true of the fibers going from the second conjugate center. When volition liberates the neuricity in the second conjugate center, it is conducted in equal quantities, by the two bundles of fibers, to the two inferior recti. If the tonicity of these muscles is the same, the two eyes will be rotated downward equally rapidly and to the same extent.

The third conjugate center is connected by means of two bundles of nerve fibers with the two internal recti, both bundles of fibers passing through the third basal center on the same side, the one to the internus of the corresponding eye, while the other bundle crosses to the third basal center on the opposite side, thence to the internus of the other eye. These fibers are, likewise, perfectly insulated. To the liberated and transmitted neuricity the two interni always respond equally in time and extent, for the tonicity of the one internus is practically always equal to the tonicity of the other internus. The third conjugate center is very properly called the convergence center.

The fourth conjugate center directs and controls the right sweep of the eyes, and is therefore connected by means of two bundles of nerve fibers with the externus of the right eye and internus of the left eye. Both bundles of fibers from the fourth conjugate center pass through the third basal center on the same side, thence one bundle goes to the internus of the corresponding eye, while the other bundle crosses to the fourth basal center on the opposite side, thence to the externus of the other eye. This arrangement of the connecting fibers is shown in the cut, and will be referred to again. When volition liberates the neuricity in this center, it is conducted by the two bundles of fibers, in equal quantities, to the two muscles, and if the tonicity of one muscle is equal to the tonicity of the other, the two eyes will move to the right in perfect harmony.

The fifth conjugate center is connected by two bundles of nerve fibers with the externus of the left eye and internus of the right. As shown in the cut, the active fifth center is probably not on the same side of the brain as the other active centers. The two bundles of fibers from the fifth conjugate center pass through the third basal center on the same side, thence the one bundle goes to the internus of the corresponding eye, while the other bundle crosses to the fourth basal center on the opposite side, thence to the externus of the other eye. In effecting the left sweep of the eyes, these muscles, under normal conditions, will respond in perfect harmony to the neuricity set free by the fifth conjugate center.

The five conjugate centers thus far studied are alike in several respects: (1) They are each under the control of volition; (2) each is connected with two muscles, the one belonging to the one eye and the other belonging to the other eye, and the connecting fibers are insulated everywhere; (3) the neuricity liberated by any one center goes in equal quantities to each of the two muscles; (4) they are all connected with the recti muscles; (5) they act in the same way whether there is orthophoria or heterophoria; in other words, these conjugate centers under the control of volition never concern themselves with the correction of heterophoria in any of its forms.

The sixth and seventh conjugate centers are under the control of the fusion faculty of the mind, hence these centers in the cut are not crossed by parallel lines as are the volitional centers.

The sixth conjugate center is connected by two bundles of nerve fibers with the two superior obliques, both bundles going through the sixth basal center of the same side, the one to the superior oblique of the corresponding eye, while the other bundle crosses to the sixth basal center on the opposite side, thence to the superior oblique of the other eye. This center acts in association with the second conjugate center. When the eyes are rotated downward by the second conjugate center, the vertical axes would be made to diverge above, a condition that would cause diplopia. The fusion faculty prevents this diplopia by exciting the sixth conjugate center, the neuricity from which is conducted in equal quantities to the superior obliques. These muscles responding prevent the divergence of the vertical axes, thus maintaining binocular vision; and they also help the inferior recti to rotate the eyes downward.

The seventh conjugate center is connected by two bundles of nerve fibers with the two inferior obliques. The two bundles of fibers pass through the seventh basal center on the same side, the one bundle to the inferior oblique of the corresponding eye, while the other bundle of fibers crosses to the seventh basal center on the opposite side, thence to the inferior oblique of the other eye. This center acts in association with the first conjugate center. When the eyes are rotated upward by the first conjugate center sending its neuricity to the two superior recti, the vertical axes would be made to converge above, a condition that would cause diplopia. To prevent this torsioning and its consequent diplopia, the fusion faculty causes the seventh conjugate center to discharge its neuricity, which is conducted in equal quantities to the two inferior obliques. These muscles responding prevent the torsioning of the eyes, thus maintaining binocular single vision; and they also help the superior recti to elevate the eyes.

The sixth and seventh conjugate centers not only act in association with the second and first conjugate centers, respectively, but, being under the mastery of the fusion faculty, they must also correct a cyclophoria which is equal in the two eyes, and must produce compensating cyclotropia in cases of oblique astigmatism

with equal, but opposite, distortion of the images in the two eyes.

Oblique rotations of the eyes can not be accomplished without creating a tendency on the part of both eyes to tort, but always to the same extent and in the same direction. If this torsioning occurred there would be no diplopia, for the vertical axes of the eyes would still be parallel, but there would be an apparent wheel-like motion of all objects in space, in the direction opposite to the torsioning. To prevent this torsioning in oblique rotations, there are two more conjugate centers, the eighth and ninth, certainly not under the control of the fusion faculty, but probably under the control of volition in the interest of visual judgments.

The eighth conjugate center is connected by means of two bundles of nerve fibers with the superior oblique of the right eye, and the inferior oblique of the left eye. The two bundles pass through the seventh basal center on the same side, thence one bundle goes to the inferior oblique of the corresponding eye, while the other bundle crosses to the sixth basal center on the opposite side, thence to the right superior oblique. This center is excited into action only when the rotation is obliquely up and to the right, which is accomplished by the associated action of the first and fourth conjugate centers, or down and to the left, which is effected by the associated action of the second and fifth conjugate centers. In either case the torsioning tendency of both eyes would be to the right. In these rotations the eighth conjugate center sends neuricity in equal quantities to the right superior oblique and the left inferior oblique, the contractions of which maintain the parallelism between the vertical axes and the median plane of the head, thus preventing the wheel-like motion that objects otherwise would have.

The ninth conjugate center is connected by means of two bundles of nerve fibers with the superior oblique of the left eye and the inferior oblique of the right eye. These two bundles from the ninth center pass through the sixth basal center on the same side, the one bundle to the left superior oblique, while the other bundle crosses to the seventh basal center on the opposite side to the right inferior oblique. This center is excited into action only when the two eyes are rotated obliquely up and to the left, which is accomplished by the associated action of the first and fifth conjugate centers, or down and to the right, which is effected by the associated action of the second and fourth conjugate centers. In either case the torsioning tendency would be to the left. To prevent the torsioning, and consequent wheel-like motion of objects, the ninth conjugate center calls into action the left superior oblique and the right inferior oblique, so as to keep the vertical axes parallel with the median plane of the head.

Like the five centers connected with the recti muscles, these two centers connected with the obliques perform the same kind of work whether there is orthophoria or heterophoria. No attempt is ever made by these two centers to correct any form of heterophoria.

In lateral rotation of the eyes only one conjugate center is excited; in vertical rotations there is associated action of two conjugate centers; in all oblique rotations there is associated action of three conjugate centers. During waking hours, consciously or unconsciously the point of view is changed frequently, and thus brief periods of rest come to all conjugate centers. It is doubtful if these centers ever excite nervous symptoms, whether the eyes be orthophoric or heterophoric. It is true, however, that fixedness of gaze for a prolonged period will cause trouble.

BASAL CENTERS.

The basal centers differ in many respects from the cortical centers. There is one basal center for each ocular muscle, and each center can act only on one muscle. The basal centers are all under the control of the fusion faculty of the mind, and none of them are ever called on to discharge neuricity unless a condition exists that would cause diplopia. In emmetropia and orthophoria the basal centers never have any work to do, and, therefore, could never cause symptoms. In ametropia there is always an associated pseudoheterophoria for the correction of which there would be unremitting excitation of one or more of the basal centers. In many of these cases the pseudoheterophoria is more serious than the causative ametropia, but the correction of the latter means the cure of the former, provided there is no underlying intrinsic heterophoria. When ametropia is complicated with intrinsic heterophoria, what to do for the former becomes a question not to be answered in this paper.

Badly adjusted spheres or cylinders always give a tendency toward diplopia, for the correction of which one or more centers under the control of the fusion faculty must be continuously active, symptoms more or less severe always resulting. Prisms excite the basal centers only.

The final object of this paper is the study of the basal centers in their relationship to intrinsic heterophoria. In intrinsic heterophoria, the two muscles of a pair have not the same tonicity, and diplopia would always result if it were not for the existence of the basal centers; for, as already shown, at least seven of the nine cortical centers have nothing to do with the correcting of any form of heterophoria.

The basal centers connected with the ocular muscles are twelve in number, and all are found in the back part of the floor of the third vertical, in the floor of the aqueduct of Sylvius, and in the anterior part of the floor of the fourth vertical, six lying on either side of the median plane. Cunningham has shown that the fibers cross from the nucleus of the sixth nerve on one side to the nucleus of the third nerve connected with the internus, on the other side (from the fourth basal center to the opposite third basal center). His interpretation of this crossing was that it associated these basal centers in the right and left sweep of the eyes. It is probable that the partial decussation of the fibers of all the motor nerves takes place between the basal centers, but not to unite them in action. The fibers conducting neuricity from a basal center do not cross. These fibers begin in a basal center and end in a muscle on the same side. The crossing fibers simply pass through the basal centers on their way to the cortical or conjugate centers, and doubtless are insulated everywhere.

The basal centers will be spoken of as right and left, and are numbered as follows: The two connected with the two superior recti are right first and left first; the two for the inferior recti are right second and left second; the two for the interni are right third and left third; the two for the externi are the right fourth and the left fourth; the two for the superior obliques are the right sixth and the left sixth, and the two for the inferior obliques are the right seventh and the left seventh. As will be seen, these basal centers are numbered in harmony with the cortical or conjugate centers.

In vertical orthophoria the right and left first centers and the right and left second centers are never called into action for the reason that, in this condition, there is never any tendency to vertical diplopia. In right hyperphoria and left cataphoria, the quantity being small or great, with the object in the horizontal plane, the right second center and the left first center are constantly supplying neuricity to their respective muscles, under the guiding influence of the fusion faculty, so as to prevent diplopia.

In lateral orthophoria, the right and left third centers and the right and left fourth centers are in repose at all times, for in such a condition there is no tendency to lateral diplopia. In esophoria, when the object is in the vertical plane, the right and left fourth centers are in a constant state of activity to prevent diplopia that would result if the visual axes were allowed to cross between the object and observer. In exophoria, when the object is in the vertical plane, the right and left third centers are continually supplying neuricity to their respective interni so as to prevent the diplopia that would result if the visual axes were allowed to intersect beyond the object.

In orthophoria of the obliques, and when there is no oblique astigmatism, the right and left sixth and seventh basal centers never have anything to do. Plus cyclophoria equal in the two eyes is doubtless corrected by the sixth conjugate center, but when the right superior oblique is weaker than the left, the work of the sixth conjugate center is supplemented by excitation of the right sixth basal center, the weaker muscle needing a greater quantity of neuricity than is supplied by the conjugate center. Minus cyclophoria equal in the two eyes is doubtless corrected by the seventh conjugate center, but if the left inferior oblique is weaker than the right, the left seventh basal center must furnish additional neuricity to this weaker muscle.

The study of the verting of heterophoric eyes is not without interest. If there is right hyperphoria, and the eyes are to be rotated upward, the second conjugate center and the right and left second basal centers withhold all nerve influence from the two inferior recti; but the first conjugate center calls into action the two superior recti, and there is associated action of the seventh conjugate center. The tonicity of the superior rectus of the right eye being greater than that of the left, the former, under the influence of a given quantity of neuricity, would rotate its eye more rapidly than the left would be rotated. To prevent the diplopia that would result the fusion faculty causes the left first basal center to send additional neuricity to the left (the weaker) superior rectus, and thus the two eyes are made to rotate upward in perfect harmony. If the same eyes are to be rotated downward, the first conjugate and the right and left first basal centers become inactive, while the second conjugate center, and, in association, the sixth conjugate center, send neuricity to their respective muscles and both eyes are rotated downward; but since the tonicity of the left inferior rectus is greater than that of the right, the left eye would rotate more rapidly. To prevent the diplopia that would result, the fusion faculty causes the right second basal center to send additional neuricity to the right (weaker) inferior rectus, so that the two eyes may rotate in harmony.

The nerve fiber connections between the cortical and basal centers and the muscles that effect the right sweep of the eyes, are shown in the cut. All neuricity is withheld from the left externus and right internus, when the right rotation is to be effected. In exophoria, the fourth conjugate center, under the guidance of volition, will send neuricity down the two bundles of nerve fibers, in equal quantities, to the right externus and the left internus; but since the tonicity of the former is greater than the tonicity of the latter, the right eye would rotate more rapidly than the left, and there would be diplopia. The fusion faculty being on its guard, calls into action the left third basal center, the neuricity from which supplements the neuricity sent from the fourth conjugate center to the left internus, and thus the left eye is made to move in perfect harmony with the right, and there is no diplopia. If these eyes were esophoric, the right eye would move more slowly than the left, under the stimulus of the fourth conjugate center, and there would be diplopia. To prevent this the right fourth basal center must send supplemental neuricity to the weak right externus so as to make it act in harmony with the strong left internus.

In the same manner as above, every possible rotation of heterophoric eyes could be studied, showing exactly the basal centers that would be called into action to prevent diplopia. But the further study would only do what has already been done; that is, establish the fact that the brain centers under the control of volition have nothing to do with the correction of heterophoria, but that this work is accomplished by those centers under the control of the fusion faculty of the mind.

From the foregoing study of the voluntary and involuntary brain centers controlling the ocular muscles, the logical conclusion concerning heterophoric conditions is as follows: These errors should be corrected by non-surgical or surgical means, so as to give to those brain centers which are under the control of the fusion faculty that rest from all excitation which they have in orthophoria. This can be done only by making the tonicity of the one muscle equal to the tonicity of the other muscle of any pair.

DISCUSSION.

DR. EDWARD JACKSON, Denver—Is not the scheme rendered more elaborate than is necessary by supposing a series of centers that are to act only in emergencies? Would not a single center, able to vary its action, be sufficient?

DR. G. C. SAVAGE—I do not want any one to overlook the experiments that have been done on animals, and what the pathology has shown. Experimenters and observers have much to do yet. I would recommend the purchase of Cunningham's work on anatomy, in which the results of careful dissections have been recorded. It is possible to study every possible sweep of the eye and every possible form of heterophoria in the line of my paper.

The Unselfishness of Physicians.—There is a disposition often to scoff at the code of ethics by which doctors of medicine are governed—at the rule which brands as a quack any practitioner who keeps for his own exclusive use and profit any discovery he may make of a curative agent. Yet there is no other profession which gives more for nothing to the public, and whose giving in that respect is absolutely without selfish motive. This is illustrated by a recent statement to the effect that the revenues of the medical profession in recent years have practically been cut in two by the hygienic reforms which have been brought about by the efforts of the doctors alone. That statement is well within the realm of truth. Medical science is constantly striving to make it possible for the human race to get along with less medical treatment. Not only are the efforts of investigators directed to the discovery of new and more effective remedies for disease, but to discover means of preventing the spread and even the inception of disease. Broadly speaking, the doctors are working continually to deprive themselves of occupation and revenue.—*Cleveland Leader.*

RETROVERSION OF THE UTERUS.

A CLINICAL STUDY OF THE COMPLICATIONS, SYMPTOMS AND TREATMENT.*

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The writer has found 112 recorded cases of retroversion of the uterus examined by him in his office practice from June 10, 1900, to Jan. 9, 1903. An accurate and fairly comprehensive record of these cases has been kept in his case book. Such essential points as were omitted in the original entry have been looked up and duly entered.

A clinical study of these records was begun with the hope that the findings might be helpful in furnishing the writer with some positive indications for treatment of future cases. He has found the study profitable and herewith submits his findings, together with such remarks and conclusions as present themselves to him.

Unfortunately, forty-three of the 112 cases whose histories are recorded were seen by the writer but once or twice, so he can say nothing regarding their subsequent course. Fifty-six cases in all were treated by the writer. A brief outline of the histories of these cases is included in this paper. The whole number (112) were tabulated and each case studied in detail. But eight cases were found in which retroversion alone existed and in six cases only in which a single complication was endometritis; in other words, in 85 per cent. of cases retroversion was but one of the three or more pathologic conditions present in each case. In many instances other lesions present were of more grave import than was the retroversion, yet, inasmuch as retroversion was present in every instance, viz., in 112 cases, while the other most frequent lesion was present only forty-eight times, it is fair to treat other lesions as complications of retroversion. The following complications were found to be present, viz.:

Prolapsus of one or both ovaries	48 cases.
Endometritis	32 cases.
Laceration of the cervix uteri	27 cases.
Prolapsus of the uterus	17 cases.
Adhesions of the uterus or ovaries	15 cases.
Laceration of the perineum	8 cases.
Movable kidney	8 cases.
Chronic inflammation of the ovaries without displacement	9 cases.

There were a few cases in which the following pathologic lesions were present: Retroflexion, chronic appendicitis, hyperplasia, salpingitis, cystitis, colitis, rectocele and cystocele. Relaxation of the abdominal walls was frequently encountered, but not accurately recorded.

We believe our records do not show truly the frequency of retroflexion as a complication. I hope to be able at some future time to say something more definite on this subject. I believe, too, the records should have been more explicit in stating other morbid conditions found in the displaced ovaries.

We all know the chronically prolapsed ovary is frequently also a chronically inflamed ovary, and this fact must be taken into the reckoning in the treatment of all cases of retroversion of the uterus with prolapsed ovary.

Regarding prolapsus of the ovary, the following findings were noted, viz.:

There was prolapsus in the right ovary in	17 cases.
Prolapsus of the left ovary in	12 cases.
Prolapsus of both ovaries in	9 cases.
Prolapsus of one ovary, side not stated, in	10 cases.

In 42.7 per cent. of cases of retroversion of the uterus there is prolapsus of one or both ovaries. In the list sixty-six women had borne children. Of these, thirty-four, or 51 per cent., had prolapsus of one or both ovaries, while of the forty-six women who had not borne children there were 14, or 30 per cent., who had prolapsus of one or both ovaries. It is thus seen that child-bearing predisposes to retroversion with prolapsus of the ovary.

The next most frequent complication was laceration of the cervix uteri, which occurred in twenty-seven cases (24.1 per cent.) and which, when present, was frequently associated with endometritis and subinvolution of the uterus. In every case but one of laceration of the cervix there are other lesions also complicating the retroversion.

There was prolapsus of the right kidney in seven cases and of both kidneys in one, the eighth case. Not infrequently a pendulous abdomen and general enteroptosis were also found associated here. It is surprising to find so few cases of laceration of the perineum recorded, yet I am convinced that my observations were accurate on this point.

There are recorded seventeen cases of prolapsus of the uterus. In most instances the prolapsus of the uterus was of the first degree only, and none of extreme prolapsus. This displacement seemed to exercise very little influence in modifying the symptoms produced by the other complications.

Adhesions of the uterus were noted in fifteen cases. For the most part these adhesions were slight, but when present, except in the three acute cases, they were considered as indications for operative intervention. Gentle massage and manipulation of the uterus followed by tampons was found beneficial in two cases. It must be remembered in this connection that these cases occurred in private practice and among well-to-do and wealthy people, so there were few cases of previous gonorrheal infection. The writer's experience in free dispensary and charity hospital practice is quite different. There he finds a much larger per cent. of inflammatory cases, both acute and chronic, due to gonorrheal infection or infection following miscarriage or abortion.

A most interesting study is that of the symptoms present. Backache and bearing down in pelvis is the chief complaint in uncomplicated retroversion, being found present in seven cases, while painful menstruation occurred in three cases only.

A somewhat different train of symptoms appears when the retroversion is accompanied by endometritis. In this class it is found that profuse and painful menstruation, burning through the uterus, marked nervousness and soreness through the uterus and general weakness are the chief symptoms. There was also backache in the majority of cases.

If we study the cases collectively we find pain as the one symptom which is almost universally present in this disease with such a variety of complications. It is recorded as being present in 83, or 74 per cent., of cases. This statement of pain includes painful menstruation in forty-one (36 per cent.) cases; backache, forty (45 per cent.) cases; pain in the inguinal regions and head, and in inflamed and prolapsed ovary, and often pain extending down the limb. In the long and varied train of symptoms recorded appear profuse menstruation, gastric disorders, headache, distressing nervousness, wake-

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fulness and general weakness. All the women in the complicated cases were invalids in a greater or less degree.

TREATMENT OF CASES.

Of these 112 cases, 56 were under observation and treatment sufficiently long to enable me to speak with positiveness regarding results. A brief history of each case is presented, excepting the five cases in which there were neoplasms causing the displacements. There were two of ovarian tumors and three uterine fibroma. These were operated on, the tumors removed and the displacements cured. The uterus was removed by the supravaginal method in the fibroid tumor cases and in the ovarian tumor cases the retroversion and prolapsus were found cured on the patient's recovery from the operation.

Thirty-five cases were treated by non-operative methods. By "non-operative methods," as employed here, we mean posture, tampons, pessary, topical applications and internal medicines. In a few of the cases a curettage was done for the cure of endometritis, as, for instance, in Group 1, Case 12, in which there was marked endometritis and erosion, a curettage was done and a pessary employed for one and a half years. The patient was cured.

In some instances topical applications were made to the interior of the uterus for the cure of the endometritis, with successful results, as in Case 61, Group 1.

In one instance curettage, trachelorrhaphy and perineorrhaphy were done as in Case 64, Group 1. Here rest in bed and postures following the operation resulted in a cure of the patient. This case is included among non-operative cases.

The internal medicines employed were of more than incidental value in assisting in bringing about cure and relief. They consisted of laxatives, when needed, cascara and rhubarb being preferred in cases of obstinate constipation. Occasional doses of salines were used in all recent cases and when there were evidences of chronic pelvic congestion. Hydrochloric acid and nux vomica and a carefully regulated diet were chiefly relied on in gastric disorders; bitter tonics and iron in suitable cases were prescribed.

Sometimes, when there was a large, tender uterus and prolapsed ovary, rest in bed with hot douches, an occasional saline, bitter tonics, general massage, passive movements and the knee-chest position were all employed, and brought to the patient great benefits. These cases are listed in the group as being benefited. They were not cured, but the patients were rescued from invalidism and were enabled to again take up and enjoy the duties of life.

The cases treated are divided into groups, a very brief outline history of each case given, with results and with brief remarks under each group. For the purpose of aiding those who care to study these cases, this will be found a convenient arrangement. It has been a laborious task for the writer to gather these histories and results, and to properly arrange and group them; but he has in the study incident to the work found himself abundantly rewarded.

The word cure here is applied in a positive sense in relation to the retroversion, but in a somewhat relative sense in reference to the complications; for instance, a case reported cured was well of the displacement at the end of the treatment and at the time of subsequent examination, and so were the complications immediately associated with or dependent on the displacement; whereas complications not so immediately associated with the displacement were not cured, as, for instance, if the patient was well of all diseases except cystitis, or colitis, she was reported as cured.

When benefits result from the treatment, the extent of the benefit is indicated. It must be evident to any one familiar with the numerous abnormal conditions we are considering under the head of retroversion of the uterus that the various morbid manifestations we call symptoms have developed gradually and have made, if they have existed long, a deep and more or less lasting impression on the system and life of the patient. I have already stated that pain is the most constant symptom, and my experience in treating these and many other cases has taught me that it is the most persistent. The three symptoms most prone to persist are painful menstruation, pain in the inguinal region and nervousness. So frequently do these symptoms remain after all other evidences of disease of the structures under consideration have disappeared that we are compelled to acknowledge that the term cure must be employed in a restricted sense. A woman who is found an invalid, and so far restored to health that she is able to again take up the duties of her position and discharge them with alacrity without suffering more than an occasional attack of pain, discomfort or nervousness, may deem herself cured. Such good results are often effected in treating retroversion of the uterus with its complications both by operative and non-operative treatment.

GROUP I.—TREATED WITH TAMPONS OR PESSARY, INTERNAL MEDICINES AND POSTURE. CURED.

CASE 7.—Miss A., aged 21. Retroversion. No complications. Overworked schoolgirl. Backache. Painful menstruation. Displacement of two or three years' standing. Rest. Internal medication. Pessary. Cure of displacement in one year. The symptoms disappeared much earlier.

CASE 14.—Miss B., aged 21. Retroversion. No complications. Backache. Painful menstruation. Pessary one year. Displacement cured. Symptoms but slight.

CASE 54.—Mrs. C. Married two months. Retroversion. No complications. Displacement of some months' standing. Slight cystitis. Tampons, then pessary four months. Cured.

CASE 12.—Miss D., aged 28. Retroversion. Slight prolapsus, endometritis and erosion. Curettement and pessary one and a half years. Cured.

CASE 61.—Miss E., aged 24. Retroversion. Endometritis, erosion of cervix. Gradual dilatation of cervical canal. Topical applications. Cured endometritis. Pessary worn one year. Displacement cured.

CASE 73.—Mrs. F., aged 30. No children. Retroversion, slight. Pelvic congestion. Recent case. Cathartics, restricted diet, internal medicines. Tampons. Cure.

CASE 100.—Mrs. G., aged 30. One child seven months old. Retroversion. Subinvolution. Ovarian congestion. Cathartics, internal medicines. Tampons. Cure.

CASE 64.—Mrs. H., aged 48. Seven children. Retroversion, first degree. Endometritis, laceration of the cervix and perineum. Curettement, trachelorrhaphy, perineorrhaphy. Rest in bed, posture. Cured.

SUMMARY—EIGHT CASES.

Pessary	5 cases.
Tampons	2 cases.
Plastic operation and rest and posture	1 case.

Of the number cured, it will be observed that they were all, except one (Case 64), young women, and none of the complications relates to injuries to the uterus or disease of the ovaries, except that one of them suffered ovarian congestion and one of laceration of the cervix. This is a most instructive series. It will be observed, too, that an effort was made to cure the endometritis by topical applications and two by curettage, and that the benefit of the knee-chest position was secured.

The pessaries employed were the Albert Smith retroversion, the Thomas-Smith retroversion or the Hodges closed bar retroversion pessary. The patient was placed in the knee-chest position or the exaggerated Sims position, with the head low and the body on the inclined plane. The uterus was then placed in its normal position by finger pressure or by a cotton probang carried behind the uterus and pressed forward and upward. In some instances these manipulations were not efficient, and then recourse was had to the Elliott or Sims repositor. If we were still unsuccessful, we knew we had to deal with adhesions and desisted from further efforts at replacement. Such cases are best treated by operative measures.

The fitting of the pessary is of great importance. The instrument should be neither too long or too short, too narrow or too wide. As a rule, a digital examination will enable one to make a close estimate of the size of the instrument required. After the introduction of the pessary its efficiency should be tested in many ways, as, for instance, by allowing the patient to walk up and down a flight of stairs or step on a chair and down again and then be examined to determine if it is in proper position and is yielding the proper support. If it does not meet all the requirements it should be replaced by one that does. In some instances no pessary will be retained or give the proper support. In such cases, as a rule, tampons, no matter how long employed, will be of little permanent value.

GROUP II.—RETROVERSION TREATED BY TAMPONS. BENEFITED.

CASE 23.—Mrs. A., aged 35. No children. Retroversion, endometritis and slight adhesions. Had pus tube removed some months ago. Tampons and treatment of the erosion. Markedly improved.

CASE 37.—Mrs. B., aged 46. Three children. Recent pelvic inflammation. Retroversion, first degree. Rest, internal treatment and tampons. Marked improvement.

CASE 49.—Mrs. C., aged 56. Three children. Retroversion, senile vaginitis, laceration of cervix. Past menopause. General and local treatment, tampons. Symptomatic cure.

CASE 53.—Mrs. D., aged 35. Two children. Retroversion, laceration of the cervix uteri and laceration of the perineum, slight. Left ovary congested. Tonics, rest, tampons. Improved.

CASE 71.—Mrs. E., aged 24. No children. Retroversion, endometritis and prolapsus of one ovary. Not many symptoms. Rest, posture and internal medication. Improved.

CASE 80.—Mrs. F., aged 39. Four children. Retroversion. little endometritis, prolapsus of both ovaries, dilated colon. Replaced uterus, applied tampons, colonic irrigation. Much improved after one month's treatment.

CASE 93.—Mrs. F., aged 22. No children. Retroversion, prolapsus of uterus and both ovaries. Has had pelvic inflammation. Tonics, alteratives, laxatives and tampons. After three months' treatment much improved. (Recent case.)

CASE 96.—Mrs. G., aged 34. Two children. Extreme retroversion, prolapsus of right ovary, a chronic invalid. Rejected operation. Rest, posture, internal medicines. Tampons. Greatly benefited after three months' treatment.

Three cases treated by this means (Cases 37, 53 and 93) were recent. The benefit of the treatment in these cases was most marked, and was in all probability quite as much due to the rest and internal medication as to the use of the tampons. This plan of treatment is certainly highly beneficial in recent cases, where there is subinvolution.

In a number of these there was so much sensitiveness of the pelvic tissues the pessary could not be tolerated. In other cases the presence of endometritis required topical applications, so that in these cases tampons were chosen instead of the pessary.

In Case 49 the senile vaginitis prohibited the use of the pessary, and in Case 23 the presence of adhesions prohibited the pessary. In this last case, gentle massage either stretched or loosened the adhesions.

The technic of the application of tampons is so well known it need not be described here further than to say that little benefit may be expected in their use unless the uterus is first replaced while the patient is in the knee-chest or in the exaggerated Sims position.

GROUP III.—TREATED BY PESSARY. RELIEVED.

CASE 16.—Miss A., aged 36. Retroversion. No complications. Backache. Profuse menstruation. Pessary gave great relief. Passed from sight after a few months.

CASE 21.—Mrs. B., aged 24. No children. Retroversion. Stenosis of internal os. Vicarious hemorrhage. Declined dilatation and Alexander's operation. Pessary gave marked relief. Passed from view in a month.

CASE 24.—Mrs. C., aged 40. No children. Retroversion only. Pessary. Marked relief.

CASE 32.—Mrs. D., aged 30. Retroversion only. One miscarriage. Pessary. Marked relief. Became pregnant.

CASE 42.—Mrs. E., aged 51. Four children. Retroversion, bilateral laceration of the cervix slight, dyspepsia, cystitis, internal medication, topical applications, tampons, then pessary. Marked improvement.

CASE 43.—Mrs. F., aged 34. Widow, no children. Retroversion, endometritis. Topical applications, internal medication, tampons, the pessary. Marked improvement.

CASE 45.—Miss G., aged 25. Retroversion and prolapsus of right ovary. Pessary and posture. Marked improvement. Not cured.

CASE 48.—Mrs. H., aged 33. Two children. Retroversion, endometritis, prolapsus second degree, chronic inflammation of ovaries. Curettement, rest in bed, general massage, tampons, then pessary. Should have been operated on. Much improved.

CASE 58.—Mrs. L., aged 32. Two children. Retroversion, prolapsus of uterus and right ovary. Slight laceration of the cervix and perineum. Rejected operation. Results unknown except that the pessary gave comfort.

CASE 69.—Miss J., aged 20. Retroversion, erosion, pelvic congestion. A few topical applications, internal medication. Pessary. Marked improvement.

CASE 70.—Miss K., aged 30. Retroversion, endometritis, ovarian hyperemia. Pessary and internal medication. Improved while at rest. Should have been curetted and had Alexander's operation.

CASE 77.—Mrs. L., aged 29. Retroversion, prolapsus of right ovary, not much pain, some bearing down. Pessary. Marked relief.

These twelve cases were treated by internal medicines, topical treatments and with pessary. These patients were all markedly benefited, and none of them have returned for operation. It is not to be denied that many such cases have relapses after a time and must patiently endure another course of treatment. In three of these cases there was prolapsus of one ovary. The ovary could be replaced, and the pessary made no pressure on it. In several cases it was found at first that the pessary could not be borne, but after using the tampons for a time the pessary was worn with comfort. It will be noted that four of these cases were unmarried women. Former experience has taught me that young unmarried women do not well bear the tampon treatment. I am convinced that such cases are best treated by the pessary or operative measures.

GROUP IV.—NOT BENEFITED BY TAMPONS AND PESSARY TREATMENT. COMPLICATIONS PRESENT IN EACH CASE.

CASE 50.—Miss A., aged 24. Retroversion, prolapsus of uterus, both ovaries, endometritis. Knee-chest position, applications to endometrium, tampons. Not benefited.

CASE 57.—Miss B., aged 24. Retroversion, retroflexion, left ovary prolapsed. Supposed to have gallstones. Tampons, pessary and posture used faithfully. No benefit.

CASE 82.—Mrs. C., aged 40. One child. Retroversion, prolapsus, some adhesions. Massage, posture and tampons. Patient refused operation. No benefit from treatment.

CASE 95.—Mrs. D., aged 33. One child, two miscarriages. Retroversion, laceration of the cervix, slight prolapsus, endometritis and both ovaries prolapsed. An invalid. Rejected an operation. Internal medicines, applications to endometrium. Tampons. No benefit.

CASE 102.—Mrs. E., aged 42. Two children. Retroversion, enteroptosis, movable right kidney, hyperplasia of the uterus. Exercise and tampon. Not much of any benefit.

CASE 104.—Mrs. F., aged 40. Two children. Retroversion, prolapsus of right ovary, laceration of cervix uteri, hyperplasia. Refused operation. Pessary a failure. Not benefited by tampons and exercise.

CASE 108.—Mrs. G., aged 33. One child. Retroversion, prolapsus, diastasis of recti muscles, prolapsus of right ovary. Internal medication, exercise and tampon treatment. No benefit.

These seven cases were not benefited. They declined operative interference. I predicted in most of them a failure, but promised to do the best for the patients aside from operation.

SUMMARY—THIRTY-FIVE CASES.

Thus we have cured by tampons or pessary	8 cases.
Relieved by tampons, etc.	8 cases.
Benefited by pessary	12 cases.
No relief	7 cases.

There were also many cases in which operation was advised and refused, so the tampon or pessary treatment was advised. They passed from view after first examination, so that it is impossible for me to state the results of the treatment.

It will be seen by this (Group 4) table that five cases were treated by exercise, tampons, etc., one by pessary alone and one by both pessary and tampons. Of the five cases treated by tampons alone there were two cases in which there was general enteroptosis, three of prolapsus of the ovaries and one in which there were adhesions.

One will ask why this form of treatment when the cases seemed so hopeless at the onset. We yielded to the importunities of the patients to do what we could for them aside from operative intervention. Doubtless the majority will in the end be operated on.

GROUP V.—TREATED BY MAJOR OPERATIVE MEASURES. CURED OR BENEFITED.

CASE 3.—Miss A., aged 25. Retroversion, slight endometritis, movable kidney. Ventrosuspension. Nephrorrhaphy. Cured.

CASE 6.—Mrs. B., aged 21. One child. Retroversion, prolapsus of ovary, endometritis, chronic ovaritis. Pessary failed. salpingo-oöphorectomy, ventrosuspension. Cured.

CASE 9.—Mrs. C., aged 25. One child. Retroversion, endometritis, slight bilateral laceration of cervix, prolapsed and enlarged left ovary. Curettage, ventrosuspension, removal of left ovary, resection of right ovary. Cured for a year, then right ovary became painful, enlarged and tender. Asks its removal.

CASE 17.—Miss D., aged 30. Retroversion, endometritis, prolapsus of ovaries. Curettage, salpingo-oöphorectomy, ventrosuspension. Cured.

CASE 29.—Mrs. E., aged 30. One child. Retroversion, prolapsed cystic and adherent ovaries. Salpingo-oöphorectomy, ventrosuspension. Cured.

CASE 31.—Miss F., aged 22. Retroversion, prolapsus of left tube and ovary, adherent right ovary. Salpingo-oöphorectomy, ventrosuspension. Cured.

CASE 40.—Mrs. G., aged 55. Seven children. Retroversion, prolapsus, rectocele and cystocele, senile endometritis. Curettage, anterior and posterior colporrhaphy, ventrofixation. Cured.

CASE 64.—Mrs. H., aged 28. One child. Retroversion, cystitis, prolapsus of one ovary, ovary cystic, perineal fistula. Operated for fistula, did salpingo-oöphorectomy and ventrofixation. Cured except the cystitis.

CASE 68.—Miss I., aged 34. Retroversion, prolapsus of right ovary, endometritis, gastro-intestinal disorder. Curettage, removal of right, resection of left, ovary. Ventrosuspension. Cured of pain and menstrual disorders. Dyspepsia much benefited. Cured.

CASE 75.—Mrs. J., aged 34. Four children. Retroversion, prolapsed and inflamed ovary, endometritis, patient an invalid. Curettage, extirpation of ovary and ventrosuspension. Patient regained her health.

CASE 97.—Mrs. K., aged 41. No children. Retroversion, prolapsus, cystic ovaries, endometritis. Treated with tampons and pessary. No relief. Curettage, salpingo-oöphorectomy, round ligaments, shortened by Tait's method. Health much improved.

CASE 105.—Mrs. L., aged 40. Two children. Retroversion, prolapsed and cystic ovary, hyperplasia of the uterus, ventrosuspension. Marked benefit.

CASE 112.—Miss M., aged 28. Retroversion, elongation of cervix, hypertrophied corpus uteri, endometritis. Curettage, Alexander's operation, later amputation cervix. Benefited.

Nine cured and four markedly benefited. Thirteen cases operated on in which benefit was experienced. In twelve cases an abdominal section was done and one or both ovaries were removed. In all of these cases the ovary removed had been inflamed for a considerable time and was thought to be incurably diseased, and hence was removed. A few of the cases had been previously treated by tampons and pessaries without benefit, but either cured or greatly relieved by curettage, suspension of the uterus and removal of one or both ovaries.

My experience with these and other cases leads me to the conclusions that where there is marked chronic inflammation of the ovaries as evidenced by severe, persistent pain in the ovarian region, painful defecation and many reflex symptoms, little short of resection or extirpation of the ovary will be of service in restoring the patient to health.

A word should be said regarding resection. In a previous paper,[1] based on a study of more than one hundred cases, the author shows that in his hands resection of the ovary is beneficial where the evidence of disease is limited to a single large retention and a few small retention cysts superficially situated, or in case of a single hematoma in which only part of the ovary was involved, and that even in such selected cases, fully 20 per cent. of cases were failures demanding a subsequent extirpation of the ovary.

This group shows the severe cases, those having so many and serious complications that any other treatment than operative was considered ineffective.

The method of ventrosuspension employed by the writer should be described. He did not follow the technic of Kelly. That method was abandoned by him some years ago because of the unfortunate reports of cases of difficult labor and of obstruction of the bowels. So far the writer has been quite well satisfied with the results in cases in which the following technic has been employed, viz.: The stitches were passed through the anterior surface of the body of the uterus just below the superior border. Two catgut stitches were carried one-fourth to one-third of an inch in depth into the

1. Amer. Gyn., December, 1902.

muscular coat of the uterus, the point of insertion into and exit from the uterus being about one-half inch apart and the stitches being separated by one-fourth of an inch. The ends of these threads were then carried through the peritoneum, deep fascia, muscular tissue and superficial fascia on either side. A third stitch, this one of silkworm gut, is placed in the tissues of the uterus more superficially and between the deeper catgut stitches. This stitch also passes through all the tissues of the abdominal wall on either side of the incision so that when tied it serves as a through-and-through stitch. The peritoneal surface of the uterus immediately over the three stitches imbedded in the uterine wall is scarified. The catgut stitches are tied first and then the silkworm-gut stitch.

From my description this would appear to be a ventrofixation, but it is not; it is a ventrosuspension. I have done a secondary operation for the removal of an inflamed ovary in two cases, and in both cases have found a single band of adhesion, in one instance one-third inch long and in the other one-half inch long, suspending the uterus as by a ligament from the anterior abdominal wall. The single superficial silkworm-gut stitch is important in preventing the formation of two bands. It is allowed to remain two weeks before removal. Several of my patients on whom this suspension has been done have become pregnant and passed through the period of gestation and labor without untoward symptoms. I do not put this forward as the only reliable means of suspension. It is, however, an efficient one and the one I prefer if neither or but one ovary is removed.

GROUP VI.—OPERATED ON WITHOUT MUCH, OR ANY, BENEFIT.

CASE 33.—Miss A., aged 18. Retroversion, marked endometritis, erosion, membranous dysmenorrhea. Curettage and Alexander's operation. Displacement rectified, membranous dysmenorrhea continues. Endometritis seemingly well for a time, then reappeared.

CASE 47.—Mrs. B. Widow. Two children. Retroversion, laceration of the cervix uteri and inflammation of left ovary. Curettage, trachelorrhaphy, extirpation of one ovary and resection of the other, ventrosuspension. Only partially relieved. After a time the remaining ovary became painful and enlarged. Patient begged to have it removed.

CASE 57.—Miss C., aged 24. Retroversion and retroflexion, left ovary prolapsed and enlarged, weak and nervous patient. Internal medicines, tampons and pessary did no good. Curettement, removal of one ovary, ventrosuspension. No relief, still an invalid.

In all three of these cases it would have been better treatment to have removed both ovaries. It was not done in the first case because the patient was a young woman, eighteen years of age. It was a very severe case of membranous dysmenorrhea, and was not at all benefited by the operation. In the second case, the woman was a widow, twenty-nine years of age, and wanted to marry again and bear children.

In our list there were two cases in which there were ovarian tumors producing the displacement. In both the retroversion disappeared after removal of the tumors. There were also three cases of small fibroid tumors of the uterus. Hysterectomy was done in these cases.

CONCLUSIONS.

My conclusions are:

1. Simple uncomplicated retroversion of the uterus gives rise to but few symptoms, the chief of which are backache and bearing-down pain. Painful menstruation occurred in 37 per cent. of the cases. Uncomplicated cases constitute but 7.01 per cent. (8 in 112) of the cases we have studied. Five uncomplicated cases were treated by the non-operative plan, three were cured and two greatly relieved.

2. The severity of the symptoms and the prospect of cure depends largely on the number and character of the complications. Prolapsed and chronically inflamed ovaries, endometritis and laceration of the cervix uteri constitute the most common and serious complications.

3. The most common complications are: Prolapsus of one or both ovaries, 42 per cent.; endometritis, 28 per cent.; laceration of the cervix, 24 per cent.; prolapsus of the uterus, 15 per cent.; adhesions, 13 per cent.; laceration of the perineum, 7 per cent.; movable kidney, 7 per cent.; ovaritis without displacement, 8 per cent. of cases. The most common and almost universal symptom is pain, 74 per cent. This includes painful menstruation, 36 per cent.; backache, 35 per cent.; pain in inguinal regions extending down the limbs. In but 21 per cent. of cases did habitual constipation exist. Various degrees of invalidism existed in all complicated cases.

4. In the treatment of the simpler and less complicated cases the non-operative treatment yields satisfactory results. Recent cases, especially those following labor, improve rapidly under this form of treatment.

5. Displacements of long duration, accompanied by the more serious complications, are not cured by this method, and the benefits resulting are scarcely sufficient to justify the effort.

6. Operative methods in the severest forms of displacement and complication are attended by a large per cent. of cures, and should be employed in preference to all other means. So large a percentage of these cases have multiple complications that two or more operations may be required in each case.

7. The danger attending the operative method of treatment is very small. In the twenty-one cases reported there was no mortality.

RETRODISPLACEMENTS OF THE UTERUS.

A FURTHER REPORT ON OPERATIONS ON THE UTERO-SACRAL AND ROUND LIGAMENTS.*

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At the meeting of the American Gynecological Society in 1902,[1] and the following month before this Section,[2] I presented this subject, reporting 8 cases operated on by the vaginal and 3 by the abdominal route. At this time I desire to report 17 cases operated on by each of the two routes, together with some points noted from this experience. There has been no fatality or even notable morbidity in the 41 cases. In every instance of shortening the round ligaments the plan suggested by Webster and Baldy has been practiced. Curettage was done in every one of the 17 vaginal operations. In 3 of them trachelorrhaphy was done in addition, and in 8 perineorrhaphy and trachelorrhaphy. In one of these anterior and posterior colporrhaphy was added; in another posterior colporrhaphy up to the vaginal roof was done. In one the anterior vaginal wall was lengthened and attached at a higher plane to the cervix. In another case hemorrhoids were removed at the same sitting. In one an ovary was resected and in 2 others the peritoneal

* Read at the Fifty fourth Annual Session of the American Medical Association, in the Section on Obstetrics and Diseases of Women, and approved for publication by the Executive Committee: Drs. A. Palmer Dudley, H. P. Newman and J. H. Carstens.

1. Bovée: Amer. Gynecol., 1902, i, 35-45.

2. Bovée: THE JOURNAL A. M. A., 1902, xxxix, 12-15.

cavity was entered through the cul-de-sac of Douglas for purposes of exploration. In 9 cases the round ligaments and in 8 the uterosacral ligaments were shortened. In none of these vaginal operations was both sets of ligaments shortened.

In the 17 cases by the abdominal route the round ligaments alone were shortened in 4 cases, the uterosacral ligaments alone in 7, and in 6 both these sets of ligaments were shortened. The vermiform appendix either normal or pathologic was removed 7 times, pelvic adhesions severed 7 times, ovaries resected 3 times and 1 appendage removed in 4 and both in 2 cases. In two instances the anterior vaginal wall was lengthened and in one of them it was detached from the cervix and reattached at a higher plane. In one case the ovarian ligaments were attached to the broad ligaments just posterior to the fallopian tubes by two stitches of fine catgut passed through them near the ovaries.

In 10 cases curettage was done. In one of these trachelorrhaphy and in another perineorrhaphy was added; in another perineorrhaphy and posterior colporrhaphy, and in 5 both trachelorrhaphy and perineorrhaphy were done. In one of these 5 posterior colporrhaphy was added. Thus it will be observed that in none was the reparative work limited to the round and uterosacral ligaments.

In my paper of last year an effort was made to show the very important part played by the uterosacral ligaments and the anterior vaginal wall, or uterovesical ligaments, in maintaining the position of the uterus. Reference was also made to the function of the round ligaments. I have found nothing to modify my views in that respect. I have done no other operation for retrodisplacement of the uterus in more than one year. Ventrosuspension, ventrofixation and Alexander's operation, all of which I formerly practiced without accident, I have abandoned. In my own work I have had but one failure in Alexander's operation, and that was probably due to faulty ligamentation about the cervix, allowing it to move forward too far, and a tendency to retention of urine. In a case of ventrosuspension the same faulty ligamentation led to recurrence of the retroversion and in one of ventrofixation. Edebohls[3] later found the cervix protruding from the vulva and the body firmly fixed to the abdominal wall.

The reasons for abandoning Alexander's operation were the journal reports of large numbers of cases of hernia, suppuration and relapses following that operation and the belief that the plans herein suggested are better. Goldspohn's modification of it was a great improvement, but not sufficient for all cases, as it was practically addressed to no supporting structures of the uterus other than the round ligaments.

Attaching the uterus to the abdominal wall never appealed to me as an ideal procedure, and yet, as a rule, it has maintained a popular position in the list of operations for retrodisplacements of the uterus. If the lower supporting structures of the uterus be faulty from maldevelopment or injury, one must expect failure, as a rule, to follow it. Such a structure[4] as this ligament traversing the peritoneal cavity would seem to be dangerous. If we are to consider the fatal complications that have been recorded we will at once see the force of this suggestion.

R. B. Hall[5] said: "I have had 3 cases of intestinal obstruction containing a coil of ileum around this little ligament left afterward. Two of the cases I have operated on, the other having declined operative measures. The case in which operation was refused died. Autopsy revealed a simple case of intestinal obstruction which could have been relieved by operation and life undoubtedly saved." Williams,[6] Jacobs[7] and Olshausen[8] report 3 cases of fatal intestinal obstruction from this false ligament, and Thomas[9] and Lindtors[10] report successful operations for the same conditions. We have further to consider the many cases of cesarian section positively due to interference with uterine development from these abdominal attachments. Only two weeks ago I saw an example of it. In this case the operation had been done by an expert, but the evidence of its causal relation to impossibility of delivery *per vias naturales* was positive.

The results in these 41 cases are nearly perfect and have determined me to examine very critically every patient in whom surgical treatment of retrodisplacement is contemplated to decide the exact causes of the displacement and to plan the measures to be employed. While a lacerated perineum is not *per se* productive of posterior uterine displacements, yet straining at stool incident to its resulting constipation may produce them. Laceration of the cervix, if deep, very markedly tends to uterine retrodisplacements. Lacerated vaginal walls—particularly its roof—is a strong etiologic factor. All these conditions should be recognized and given their proper positions in etiology that treatment may be scientifically applied. In many cases, particularly in women who have had tedious labor or have been delivered carelessly with forceps, the fascia by the sides of the rectum and which goes toward making up the uterosacral ligaments, will be torn and much relaxed. In such the vaginal route is not indicated. Here abdominal section and the Trendelenburg position are imperative. Intraperitoneal conditions are best mastered by it, and one knows those conditions, which is not the case with the vaginal route. I have not the intrepidity that necessarily accompanies severing intraperitoneal adhesions without the sense of sight. I know it is done, but the inability of the skillful diagnostician to always detect abnormal pelvic conditions leads me to fear this procedure. Therefore, I prefer always to open the abdomen when such work is to be done.

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DISCUSSION

ON PAPERS OF DRS. DUNNING AND BOVÉE.

DR. G. BETTON MASSEY, Philadelphia—I have never failed to get perfect results in these cases of retroversion and retroflexion without ovarian or tubal disease. All the symptoms disappear, although I believe that in actual retroflexion I have never straightened the uterus. It is my belief that the posterior wall of the uterus is sclerosed and atrophied and that nothing will remedy this, though perfect health may be restored. These patients are entitled to the best help, and none of the uncertain operations are necessary. For cases complicated by ovarian disease I presented a method last year at Saratoga which has evoked considerable interest since, and I am sure that it will be very valuable. It is the cataphoresic diffusion of mercury through the abdominal wall into the chronically inflamed parts, thus sterilizing the disease. I have since verified the peculiar experience then related, in which menstruation was suppressed for a month or so after treatment. Such treatment may have to be greatly prolonged, but many patients are also cured of the patulous pus tube

3. Edebohls: Trans. Am. Gyn. Soc., 1901, xxvi, 159.
4. Bovée: THE JOURNAL A. M. A., 1899, xxxiii, 268.
5. Hall, R. B.: THE JOURNAL A. M. A., 1899, xxxiii, 186.
6. Williams, D. H.: Am. Gyn. and Obst. Jour., 1900, xvi, 573.
7. Jacobs: Deutsche Med. Woch., 1894, xxii, 489.
8. Olshausen: Westphalen, Monatsschrift f. Geb. u. Gynäk., July 3, 1895.
9. Thomas, C. P.: Am. Gyn. and Obst. Jour., 1901, xviii, 153.
10. Lindtors: Centralbl. f. Gynäk., Bd. xxii, No. 16, 414.

and the adhesions that follow a pelvic inflammation. I think that if Dr. Dunning would substitute this treatment for the method which failed, he would have a higher percentage of successes.

Dr. E. S. Lewis, New Orleans—It is essential to remove the adhesions which are responsible for the displacement by massage, trachelorrhaphy or operations on the vagina or perineum; then, even if the retroversion continues, in many instances the symptoms are relieved. My usual treatment in suitable cases is the use of the pessary; cases in which all inflammatory complications have been subdued entirely. I have derived marked benefit from the pessary and still resort to it, although not as frequently as in former times, as it is an instrument which has and may do a great deal of harm. Of the operative methods I prefer ventrosuspension, not ventrofixation.

Dr. Walter B. Dorsett, St. Louis—I have not abandoned the pessary, and do not expect to. The pessary has a place to-day as it always had. Some inflammatory cases with adhesions can be treated for a considerable length of time with a lamb's wool tampon, and finally the pessary can be worn to good advantage. A great deal of harm has been brought about by Kelly's operation. I do not believe in tipping the uterus upside down and fastening the posterior wall of the uterus to the anterior wall of the abdomen. It is not in accordance with physiology. On account of the leverage it is made to draw out pieces of peritoneum to form long bands. These bands may catch intestinal loops and serious trouble result. But if the anterior part of the body between and below the two attachments of the round ligaments is attached to the anterior abdominal wall I can not see that any harm can come from it. I have had five cases of labor following ventral suspension, and one of the cases has been delivered twice. I do not see how we can have any entanglement of the bowel if the cases are selected properly and the anterior wall of the uterus brought in close apposition to the uterus. There is no leverage on which the uterus can pull back, but it is held firmly against the abdominal wall without any possibility of the intestines dropping in front of it. If turned back the other way we have the entire intra-abdominal pressure bearing down on the uterus and pulling out these adhesions.

Dr. S. E. Milliken, Dallas, Texas—I believe that we all to some extent use the pessary, but it is a question whether a pessary can replace the uterus. The pessary is indicated in cases in which there are no inflammatory adhesions; in other words, in retrodisplacements of a more or less congenital or acquired type without any inflammatory condition.

Dr. C. O. Thienhaus, Milwaukee—The uterus belongs in the pelvis, and there is no logical reason why we should perform abdominal section and abdominal suspension when the same work can be done with more safety to the patient and better immediate and remote results by way of the vagina, and at the same time by vaginal suspension the uterus is left in the place where Nature placed it. All surgeons with a little experience in vaginal celiotomy concede that this operation has great advantages over abdominal section so far as the immediate and remote safety of the patient is concerned. Conceded this, the logical consequence is, that everything ought to be performed by this route, if possible. It is true that vaginal celiotomy and suspension are hardly applicable for the general practitioner, but the specialist ought always to bear in mind that the welfare of the patient is the first law which has to govern our methods of operation, not difficulties of operative procedures, which can be overcome by practice. Whether one prefers vaginal shortening of the round ligament following the methods of Vineberg, Wertheim or Ries, or vaginal suspension in cases of retroflexion of the uterus is merely a matter of personal like or dislike. But it must be conceded that vaginal shortening of the round ligament allows a greater mobility of the uterus. I prefer the following method of vaginal suspension: After an inverted T-shaped incision on the anterior vaginal wall, and thorough freeing of the bladder from the cervical part of the uterus the vesico-uterine fold is opened by a transverse incision, then the uterus is drawn forward by a tenaculum forceps and drawn into the vagina. If it is necessary to perform conservative or radical work on the appendages after this has been done under perfect guidance of the eye, the uterus is pushed back and now fixed by one silkworm-gut suture 1.5 to 2 centimeters above the internal os. This suture, passing through vagina, peritoneal fold and uterus, closes the abdominal cavity and remains for six weeks. What is accomplished by this? The vesico-uterine fold which formerly reached down to the point of the internal os now only reaches to the middle of the body of the uterus, but the fundus of the organ is left free and movable, so that no disturbance can occur during future pregnancies. In chronic inflammation of the appendages with adhesions in Douglas' pouch, parametritis posterior, etc., I usually employ hot douches, massage, etc. (not in pus cases), for two weeks before the operation. I do not by this time make the uterus movable, I open the posterior cul-de-sac first, and after freeing the uterus from the adhesions the anterior celiotomy is performed in a manner as cited above. In such cases a strict diagnosis and selection must be made before operation, as in some of them it is preferable to use the abdominal route because of too dense adhesions. Many women afflicted with retroflexion, who would not submit to abdominal suspension, have, after learning the advantages of the vaginal route, readily consented; it is my opinion that many women, if they knew the difference between abdominal and vaginal celiotomy, would still less allow abdominal operations. I never lost a case of this class operated on by the vaginal route, and I never saw an infection. The operation can be performed in uncomplicated cases in from 5 to 10 minutes, and the patient can leave the hospital on the eighth day, provided no plastic operation has been found necessary. I believe, furthermore, that this operation will do away with many a pessary and its inconveniences. After proposing this method to a patient wearing a pessary I have no difficulty in obtaining her consent for operation.

Dr. J. H. Carstens, Detroit—Dr. Thienhaus does a Mallincrodt operation and a Duehrssen, which is all very good, and yet once in a while there comes a case in which you can not use either. What is to be done? If a uterus that is turned back is turned over there results a general ptosis of the uterus and of the other pelvic organs; there is a dragging on the bladder, and all these organs can not be lifted up by that kind of an operation. In such cases a ventral suspension is required, or a sacral ligament operation, or a shortening of the round ligament. Dr. Dunning covered the whole ground; he simply said that a retroverted uterus was a complicated disease, some cases can be cured by the pessary and local treatment; some cases with an operation, and some can not be cured by either method. I do not see what we can accomplish in some of these cases by insisting on an operation. Some operations are very good in a certain number of cases, but are not worth a continental in others. It is a question of diagnosis, and then apply the treatment indicated in that particular case. Bovée's operation is a splendid one in certain cases, but he does not do that operation in every case. He selects his cases and always does the operation that is applicable in that particular case.

Dr. V. M. Showalter, Point Clear, Ala.—We have to face conditions and not theories. In addition to the ptosis of the pelvic organs, there is a certain amount of hyperplasia which, with the congestion of the organs, makes it necessary to attempt to restore the organs to their normal condition. Allow a certain period for the absorption of exudate which may have accumulated as a result of the passive congestion before any radical steps are taken for fixation of the uterus in the abdominal cavity. When this course is pursued the percentage of failures will be less after a properly selected pessary has been used; and I would like to lay special emphasis on the proper selection of a pessary according to the individual requirements of the case.

Dr. H. O. Marcy, Boston—Fifteen years ago we had reached a great point, we thought, when the Alexander operation gave us the shortening of the round ligaments. After a little while we found that the operation was a failure. It was not physio-

logically correct. But occasionally good results follow the Alexander operation. Opening the abdomen, however, is the most important procedure, because there is almost always some other condition than that described by the last speaker. The uterus in its normal position is freely movable. When it is out of place there is suffering and discomfort and a whole train of pathologic symptoms. Only by opening the abdomen can we determine what these other factors are. Then we are able to shorten the round ligament so as to restore the reproductive organs to their normal condition, and that is by ventral suspension according to physiologic principle. This is so easy and clear and successful in the hands of an aseptic operator that we have little to look for in the way of improvement. The operation is ideal. The shortening through the vagina is not as satisfactory in my hands as is the abdominal route, since by this method it is impossible to determine accurately the condition of the pelvic structures.

DR. EDWIN RICKETTS, Cincinnati—I advocate the abdominal route. As Dr. Dunning has said, each case is a case in itself and each man must meet the emergency or let the cases alone. One thing not mentioned is pregnancy after ventrofixation. It has been my misfortune to look after some cases that have had all kinds of shortening of the round ligaments done. One case, a woman of 27, had her right ovary removed and had a ventral fixation. Four years afterward she became pregnant twice, and the general surgeon who saw her thought she should not go on to full term. Abortion was resorted to at two different times. Finally at the third pregnancy she consulted a gynecologist, who stitched the uterus to the abdominal wall and told her to let the pregnancy continue. She was delivered of a child at full term. The anterior wall of the uterus had been brought up tight against the peritoneum and the ligament that had formed was four inches in length by actual measurement. After ventral suspension a woman takes her life into her own hands, but the case should be explained fully to her, and if she ever becomes pregnant she ought to agree to surgical intervention. As to the pessary, I want to caution those who are so sure as to the healthy conditions in round ligaments and ovaries. If the abdomen is opened a diseased ovary is often found with the appendix attached to it. Pessaries have been on the down grade. If pessaries are to hold up the uterus, to allay the uterine congestion and overcome the dragging of the appendix, our friend Massey is correct when he says he will put his patients on their backs and produce contraction of the ligaments. It is a much better and safer operation than to resort to the pessary in cases in which you do not know what is inside.

DR. F. F. LAWRENCE, Columbus, Ohio—There is difference of opinion because we approach cases with a clinical rather than with a philosophic eye. Any operation or method based on sound philosophy will and must prove correct; and any operation based on false philosophy will and must prove faulty. Is the replacing of one pathologic condition by another sound philosophy? Do we ever find as a physiologic condition a fixed uterus? Is there ever a physiologic exception, other than the broad ligament, to the rule that the ligaments are merely guy-ropes which keep the uterus from tilting in one direction or another? If that be true, then the one factor to ensure success in removing the conditions which cause the retroversion or flexion is to first restore the tension of the broad ligament, giving the uterus support from above as it should have, and restore the natural support from below, whatever it may be. Many cases, if caught when descending, can be cured by electrical treatment by restoring the tone of the tissues. Put them to bed and keep them quiet. Pelvic massage has its place as much as any operation and should be given in these cases. It is much better than an operation which is finer in theory than in result.

DR. C. LESTER HALL, Kansas City, Mo.—While physiologic processes are referred to, I am surprised that nothing has been said of Nature's way of correcting these displacements. If these patients who come to me for such conditions are married I tell them frankly to become mothers. They become pregnant with the uterus in a good physiologic condition. A week or ten days after the child is born they are put in the genupectoral position several times a day. The uterus is kept in position, the woman kept in bed for three or four weeks until the uterus has returned to its normal size and position, and they are cured women. I have done this repeatedly, and I believe the easiest way is the best, and that is the physiologic or Nature's way.

DR. A. PALMER DUDLEY, New York City—In pregnancies after ventral suspensions I have measured the ligament immediately after delivery and a week and two weeks afterward. I have also opened the abdomen and taken exact measurements in cases where an appendicitis or disease of the appendages required a second operation. Of my 269 cases—and in each, bear in mind, treatment was given first—I find that I did 99 ventral suspensions without a death, and following that I am sure I can recall to mind more than eight deliveries that I made myself, and I had no difficulty in having my patients go to full term. I do not denude the fundus, but take the fundus half way between the tubal entrances and pass two silkworm-gut sutures into the uterus, without touching the mucous membrane, and out through the abdominal wall completely through the skin. Then I scarify the top of the uterus, just as in vaccinating, let it come up loosely against the peritoneum of the anterior abdominal wall, first loosening the peritoneum a little on either side with my finger. The uterus remains in that position with the stitches in place for three weeks. Then the sutures are withdrawn and the peritoneum drops down to form a ligament and there is no chance for an intestinal obstruction, but it is a new urachus running from the abdominal wall to the top of the uterus and off to the base of the bladder. The ligament is triangular in shape. Ventral fixation is a pernicious thing and should never be done, from the obstetric standpoint, bear in mind, that the uterus does not rise perpendicularly toward the diaphragm, but it comes forward, the abdominal muscles distend and the fundus of the uterus is not more than two inches above the fixation point when the woman is ready for delivery.

DR. L. H. DUNNING—We should more frequently consider the treatment of disease from all its bearings. We have considered the operative treatment too frequently to the exclusion of all other forms of treatment. I have seldom found any one in any of the meetings I have attended who would consider anything but operative treatment. I would not, in my own family, trust a man who had nothing in his head but operation. I like to operate when it is necessary, but I abhor an operation when it is not necessary. I have done all the various operations, as most of you have, a good many times. My work with ventral suspension has yielded the best results. I have been at a loss to understand how so many cases of obstruction of the bowels occur in the hands of others. I never had a case of obstruction, and I know of a dozen women who were confined without difficulty, although I know that obstruction will occur without any assignable cause. I know of one case of kinking of the bowel from adhesions of the intestine to the anterior wall of the abdomen. There was a little sepsis, the bowel stuck there and obstruction occurred. My method of ventral suspension agrees almost exactly with that of Dr. Dudley. I do not take my stitches out through the skin, however, although I put one silkworm-gut stitch between the other two and bring that one out on the skin. It accomplishes the same result. The middle stitch prevents the formation of two bands, which is important in these cases. I have never seen any unpleasant effects from this operation. There is free movement of the uterus with a band about one and a half to two and a half inches in length. Twice I have reopened the abdomen for other purposes and found a single band. I would put forward ventral suspension as one method for overcoming retroversion of the uterus when all other methods failed. I think Dr. Bovée will come back to ventral suspension after a while. I have been through the same experience from the beginning, only to drop one method after another. Dr. Ricketts condemned the pessary because he does not know what is inside. Does he open the abdomen of every case that comes to him? That is what we must conclude from

what he said. That is a perfect fallacy. What Dr. Hall said, according to my experience, is true. I wish to call your attention again to Dr. Munde's article,[1] in which he went all over this ground and showed that only 5 per cent. of cases were cured when they become chronic by tampons and pessaries, but that a large percentage of cases were cured after confinement by the posture method, by the exercise treatment and the use of tampons and pessaries in suitable cases.

DR. WESLEY BOVÉE—Some use sutures through the skin in ventral suspension. I never put a suture through the skin in any operation; I am opposed to it. We forget an element here, the uterosacral ligaments. They have a tendency to drag the cervix backward and upward. When abnormally attached they have a tendency to drag the fundus backward. Another element is whether this attachment is abnormally high, or whether the anterior vaginal wall is abnormally low when it draws the cervix forward. What is the use of ventral suspension in such a case? The uterus stands straight up; it is allowed to come forward against the abdominal wall; intraperitoneal pressure pushes it down. I mention one case in my paper where the ovaries had been removed and in which I did a ventral suspension. Dr. Edebohls removed the uterus afterward and found the cervix protruding from the vulva and the fundus still firmly fixed to the anterior abdominal wall. What is the use of a ventral suspension? Suppose after a tedious labor you have torn off these uterine supports and lost the supporting power. The only method of treating that case should be to correct the injury that is done. You must do that work before you will do successful work. If something else is needed do it. Treat everything that must be treated. I did not for one moment expect to be understood as saying that these operations were applicable to all cases. I treat many of these cases by the use of tonics, pessaries and massage. You can tell at the beginning whether you can do anything with such treatment. But you can not expect massage to do any good when the cervix is badly torn, or the perineum ruptured and these ligaments torn all to pieces. I put these women, not on their backs, but on their abdomens, so that the uterine fundi will drop forward. That is the same position I put them in after an operation on the uterosacral or round ligaments. I do not let the weight of the uterus drag on tissues I have sutured. I want the ligaments to be as lax as possible during healing. As to the postural treatment in cases following delivery, I agree in what has been said except that I would never feel it necessary to introduce my fingers into a woman's vagina within a week or ten days after delivery for purposes of reposition of the uterus; nor would I in the first week of labor put a woman in any position, such as the genupectoral, that taxes her already exhausted vitality. I would also fear the occurrence of embolism. These methods which I have suggested are in the line of physiologic repair, and are directly in opposition to the ventral suspension, which is unphysiologic.

EXERCISE AS A MODE OF TREATING DISEASES OF THE HEART.*

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Our knowledge of diseases of the heart is of comparatively recent date. It is true that Vesalius did much to make known the anatomy of the organ and that Harvey demonstrated its purpose or function. This much was learned in the sixteenth century, and during the following centuries contributions were made slowly to a knowledge of its pathology; but methods of physical diagnosis by which its pathologic states could be recognized during life were not discovered until the end of the eighteenth and first quarter of the nineteenth centuries.

The opinions of former generations of medical men have not yet been outgrown by laymen, and many of the latter think that a permanent anatomic defect in the heart means sudden death, death which is especially apt to be caused by physical exertion. The fact that overexertion, either mental or physical, can cause dilatation, and, perhaps, fatal weakness, of the heart when it is defective, led to the prevalent opinion just expressed. Stokes, in the middle of the nineteenth century, was one of the first to register his disbelief in the danger of all exercise, and even faith in the curative effect of suitable kinds, for he wrote: "The symptoms of debility of the heart are often removable by a regulated course of gymnastics or by pedestrian exercise, even in mountainous countries, such as Switzerland or the highlands of Scotland or Ireland." As late as 1876, however, Rosenstein wrote of exercise: "It must be taken cautiously, and all severe exertion, such as mountain climbing, etc., should be strictly avoided; but it is just as injurious to condemn a patient with heart disease to perfect quiet." Between 1862 and 1872 Sutorburg of Stockholm and Zander described their experience in the treatment of cases of heart disease by gymnastics. In 1884 Oertel announced the results of his trials of more vigorous exercise, such as mountain climbing, and elaborated the mode of treatment which bears his name. Later Schott of Nauheim made known his method of treating these cases by "resistance gymnastics" and the carbonated, saline baths, whose curative power in such diseases had been made known earlier by Beneke. During the last thirty years massage has also been used for the treatment of heart diseases.

From this brief and rather fragmentary history of exercise as applied to the treatment of heart disease, it is seen that four forms: 1, Massage; 2, Swedish gymnastics; 3, mountain climbing, and, 4, resistance gymnastics, have been used. As advocated for the treatment of heart diseases, each form of exercise has one important factor in common, which is that exercise must be increased in severity very gradually and breathlessness must be avoided.

Valvular lesions of the heart rarely are corrected by subsequent changes in the valves, but a strong heart commonly will compensate for the valvular defect. Therefore, the prime indication for treatment in valvular disease of the heart is to make, and to maintain, a strong heart muscle. This evidently is also true when we have to do with degenerations or fatty infiltration of the heart or dilatation from any cause. It is well known that voluntary muscles atrophy and degenerate when they are unused or used little, and that they can be made to grow strong only by gradually, day by day, increasing the amount of work which they do. These statements are as applicable to the heart as to voluntary muscles. Moreover, as the latter may be greatly injured, even strained beyond repair by an unusual, sudden and excessive exertion, so may be the heart, and it is much oftener.

These well-known facts afford a logical basis for the employment of exercise in treating heart disease. Drugs, such as digitalis, may temporarily contract the organ when it is dilated, and strengthen it when it is weak. But permanent recovery of strength is only obtained by improving the nutrition of the heart and by relieving

1. Amer. Jour. of Obstet., 1888.

* Read at the Fifty-fourth Annual Session of the American Medical Association, in the Section on Materia Medica, Pharmacy and Therapeutics, and approved for publication by the Executive Committee: Drs. S. Solis-Cohen, George F. Butler and N. S. Davis, Jr.

it of excess of work. Both of these objects can be accomplished by judicious exercise of the voluntary muscles.

When the heart is weak or compensation is broken it beats rapidly, feebly and often irregularly. Each muscle fiber does not do its whole duty, but contracts imperfectly; therefore, the heart does not completely unburden itself. This is partly due to the weakness of the heart, and often also to the accumulation of blood in the viscus and consequent distension of it.

The effect of muscular exercise on a weak or dilated heart has been carefully studied during the last few years. The most striking effect is that often obtained when the heart is dilated, namely, rapid and very noticeable contraction of it. When the heart is weak and beating rapidly, but is not dilated, the effect is less striking, only a slightly slower and stronger beating being produced. Not infrequently the apex beat of a dilated heart will move an inch nearer the sternum during "resistance gymnastics," or a weak heart will beat from 5 to 15 beats less per minute.

These results are undoubtedly effected by the extra amount of blood which is drawn into the muscles when they are used. Consequently the heart is depleted and arterial pressure is lowered, so that it works against less resistance.

Unquestionably, the first or immediate effect of muscular work is to increase blood pressure, but this rise is temporary and is followed by a more persistent fall, which is caused by the dilatation of arterioles in the hard-used muscles, a dilatation necessitated by their demand for food and for more rapid removal of waste by irrigation. The primary increase of pressure is in proportion to the degree of exertion, but the secondary fall is more dependent on the duration of muscular movements, and the number and size of muscles used. It is, therefore, possible by trivial exertion to avoid an increase of pressure, and by using many of the large muscles to ultimately lower pressure very greatly. This is the reason for what may be called the first rule in applying exercise to the relief or cure of heart diseases—that is, *the muscular effort must be slight, but numerous large muscles must be used.*

Mitchell, Brunton and others have shown that massage produces an increased flow of blood through the voluntary muscles, and the effect of athletics on blood pressure has been studied by Ray, Allbutt, Oliver, Moso and others with, among other conclusions, the discovery that the average blood pressure of athletes is habitually lower than of those who lead a sedentary life.

The walls of blood vessels deteriorated by advancing years, syphilis, alcohol or lead, respond less readily when the muscles which they supply demand more blood than they should. But as atheromatous and degenerative changes are often chiefly confined to visceral arteries, massage and resistance exercises prove very helpful in certain cases, and disappointing in those in which the arteries generally are involved.

Although the aorta and left ventricle can be unburdened by exercise, it might be supposed that the veins and the right side of the heart would soon be overdistended. This will take place if movements are made with rapidity and the exertion is considerable, but when the movements are made slowly and the exertion is slight it does not happen. Much of the serum which flows into the moving muscles is diverted into the lymphatics, and the movement of lymph is, therefore, greatly accelerated. The more rapid bathing of the muscle fibers with fresh lymph improves their nutrition, and the more rapid flow of lymph hastens the removal of waste products. Just as in these ways the voluntary muscles are made stronger, so the heart is, because when unburdened it contracts more forcefully, which insures a more generous supply of blood through its own arteries and lymphatics.

Undoubtedly, deep respiratory movements which exercise insures play an important part in improving nutrition, for not only is the blood more thoroughly oxygenated by them, but the fully distended lungs hold more of it, and, therefore, unload the right ventricle. The variations in intrathoracic pressure, produced by deep inhalations and complete exhalations, help greatly the onward flow of venous blood and lymph. They may also aid materially the filling and emptying of the cavities of the heart. Therefore, the second rule for the conduct of exercise for the relief of cardiac disease is naturally that *respiration must be deepened, but not hurried,* for quick, irregular and imperfect respiratory movements will lessen the variations in intrathoracic pressure, impede venous and lymphatic circulations.

The third rule is that *the exercise must be graduated.* At first only the lightest should be used, and very gradually it must be increased in vigor, and it must be adapted to each case. Under no circumstances must breathing or the heart be hurried.

Massage and resistance gymnastics are the gentlest forms of exercise, and should be first used in all cases. The latter require less training than do the former, and can be best directed by a physician. They therefore seem to me most generally useful. They consist in slow flexion and extension of the hands, then of the forearm and later of the whole arm. Similar movements of the feet and legs, of the head and of the body at the hips should follow those of the hands and arms. The arms, legs and body also may be slowly rotated, and the latter may be bent to the right and left, as well as forward and backward. These movements should be repeated for from eight to fifteen minutes. At first no resistance need be made, but after the two or three first seances a trifling resistance to each movement can be interposed by the nurse or physician. This resistance can be gradually increased day by day, but never should be enough to increase the rapidity of the heart or respiration. When a moderate degree of resistance is well tolerated, patients can be taught to resist movements of flexion by the extensor muscles or of extension by the flexors.

Hill climbing is not adapted to cases of very considerable weakness and dilation, such as can be treated by massage and resistance gymnastics. It is, however, a mode of exercise which is particularly adapted to those who have first been trained by the other method, or who are fairly strong at the start. Deep breathing is sure to be caused by hill climbing, and undoubtedly is a most important factor in bringing about improvement. Moreover, a more rapid loss of fluid by evaporation from both lungs and skin is certain to take place. However, the distance walked, the grade climbed, the frequency of the stops for rest, must be carefully adapted to each person. So soon as the heart is felt to thump or the breathing to shorten, a stop should be made, and deep breaths and a rest taken.

Only those who have had personal experience in training people, either with or without heart weakness, can appreciate fully the effect of graduated exercise.

Although resistance gymnastics are only one element of the Schott treatment, the carbonated saline bath being the other, by abundant experience I have learned that the exercise alone will accomplish the desired purpose,

although undoubtedly the baths are useful. So, too, hill climbing is only one element of the Oertel treatment, a restriction of food and drink being the other; both of these last are only applicable to those patients who are obese, or at least are well filled out with fat.

All forms of heart disease, accompanied by muscular weakness, with or without dilatation, can be treated with hopefulness by exercise. The best results are obtained in cases of dilatation which are due to high arterial pressure or physical exertion, and in which there is no, or trifling, degeneration. In the early stage of muscular degeneration recovery can be effected. If, however, there is much degeneration or a cause for its increase, only temporary improvement will be obtained.

For the treatment of obesity and fatty infiltration of the heart, Oertel's treatment is particularly well adapted, although other kinds of graduated gymnastics, with a suitable regulation of diet, will also give good results.

Resistance gymnastics and massage are adapted, I believe, to a group of cases for which I have not seen them advised. I refer to convalescents from acute endocarditis, whether from rheumatism or other infection. All practitioners have observed frequently a break in compensation soon after patients begin to move about. This is because the heart has not had the time or the training necessary to enable it to compensate for the valvular defect, and a small amount of exertion strains and dilates it. Such patients should be kept in bed for at least two weeks after the acute infection which causes the endocarditis is over. During the last half of this time, resistance exercise or the gentlest massage will greatly help promptly to effect compensation. This treatment should, if possible, be continued for some weeks longer, and the amount of walking, stair climbing, etc., should be carefully regulated.

Of chronic valvular diseases the mitral oftenest respond to gymnastics, but numerous cases will be met in which compensation can not be restored by any treatment. Aortic valvular affections are less certain to be improved, for breaks in compensation occur in them frequently after very considerable hypertrophy has taken place, and when a little more can not afford relief.

Although when the heart degenerates or grows weak because of atheromatous arteries a perfect recovery is rarely effected, a temporary improvement often is. Even angina pectoris is not a contraindication. I have seen several cases of the latter disease very greatly improved by resistance gymnastics.

I do not wish, while advocating exercise for the treatment of heart disease, to leave the impression that drugs are not sometimes needed, or that it will certainly effect recovery. But it is a mode of treatment that should not be neglected and one that is essential in many instances.

DISCUSSION.

Dr. W. W. Tompkins, Charleston, W. Va.—I agree substantially with all Dr. Davis has said. I believe we are sometimes a little derelict in our duty in not exercising sufficient care to prevent the patient from taking too much exercise. I will mention two cases which I lost. One patient was 48 years of age with a well-marked organic heart lesion, and I advised against exercise and had him change his office and sleeping quarters from the upstairs to the ground floor. This patient got along very well, and I had cautioned him never to take any severe physical exercise. One day his son called him to assist in turning a skiff, and while doing so he dropped dead. In the other case I had advised against exercise, but one day he asked permission to play baseball. I advised against it, but he played anyway; as he ran around the bases he dropped dead on the third base. Statistics given us by Oertel of Germany and Zivink of Australia certainly show that under certain circumstances great benefit is derived from moderate exercise. In addition to the medical treatment it is probable that most of these cases should take some form of iron. How often do we find cases of heart diseases suffering from anemia? I believe in the majority of instances a certain amount of exercise is advisable, but in some instances I believe that exercise should be only passive, such as riding about in sunlight and air, and when we give this advice we should add a caution against overexertion.

Dr. Solomon Solis-Cohen, Philadelphia—We agree that the indications are largely governed by the condition of function. The endeavor must be to equalize function—to restore the balance of function. When there is depression of a function it may be exalted or other functions may be depressed to its level as seems most wise in the individual case; and similarly overexalted functions may be depressed or normal functions temporarily exalted. In cardiac disease, as a rule, we are compelled to pay more attention to the depression of normal function to the level of the impaired heart than to exaltation of cardiac function, hence we caution against overexertion. In the discussion on diabetes it was thought that physicians had gone too far in restricting the carbohydrate diet and perhaps we have also gone too far in restricting exercise in cases of heart lesions. Of the value of depressing the general function to the level of the impaired function there can be no doubt, but at the same time the endeavor should be made to bring up impaired function to the highest level consistent with maintenance of life.

Dr. N. S. Davis, Jr.—There is no doubt that overexertion, or exertion made suddenly and considerable in amount, will often cause a fatal result in heart disease; and in those without heart disease this may cause a temporary condition which will produce illness for the time being. On the other hand, take the cases of heart lesion referred to by Dr. Tompkins; if those individuals had been taught by suitable exercise to understand just how much they could do and how much they could not do, the one would not have played baseball and the other would not have attempted to lift the skiff. Furthermore, if the heart had been properly exercised the probabilities are it would have been able to withstand a certain amount of extra exertion—I do not mean the amount put on it in these two cases. There is no doubt that a weakened organ must be carefully watched, but it can often be made stronger by suitably arranged exercises. Moreover, by these exercises the patient will learn to know just about how much exercise he can take and how to regulate that exercise. This is a very important result of such treatment.

THE FUTURE OF PREVENTIVE MEDICINE.*

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Among the many subjects claiming the attention of this Association, none can be more important to the welfare of humanity than that of preventive medicine. The term implies an organized effort by the medical profession to protect mankind from attacks of those recognized causes of disease and death that can be avoided or destroyed. To avoid or destroy the cause is not only to escape the disease, but also to prevent the generation of countless germs fraught with danger. The list of pathogenic organisms whose appearance, characteristics and behavior are sufficiently known to enable us to avoid or destroy them, contains the names of the germs whose invasion of the human system re-

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sults in the diseases most widespread and fatal, the scourges to which five deaths out of every ten may be traced.

Think of the results in one decade were the death rate diminished by 50 per cent.; of the families now bereaved that would remain unbroken; of the busy brains and hands now stilled that would be adding their quota to the wealth and comfort of the world. Yet that such a beneficent result is within the reach of organized effort a consideration of the facts below enumerated will demonstrate. Think of pulmonary tuberculosis: About two people out of every hundred are infected with tuberculosis. Out of every seven deaths, one is from consumption. Over one hundred and fifty thousand people die of it every year in the United States. The cause of this "Great White Plague" is well known. Its presence in a sufferer's tissues is readily recognized, and the precautions, which would prevent the escape of a single germ from this source of contagion are few, simple and easily adopted. Yet all over our country the sun shines daily on thousands of perambulating incubators of death. each one of whom, during the hours of daylight, distributes around him germs enough to infect every man, woman and child in the republic. All this can be remedied only by preventive medicine. Think of typhoid fever, of which it might be said that every case is the result of criminal ignorance, or still more criminal carelessness. Think of smallpox, and Jenner, but do not consider that victory complete while thousands yet deny the efficacy of vaccination, or while men like Lord Kelvin, purest gems of intellect, but with one faulty facet, deny its usefulness and support their position with arguments too puerile to be worthy of respect. Think of pneumonia, with a death roll next to that of consumption, with a known pathogenic bacterium, but without, as yet, any general effort to limit the germs to the person of the patient. And remember the most widely distributed of all diseases, malaria, with its recently discovered possibilities of prophylaxis; the equally marvelous facility with which yellow fever can be corralled and its ravages stayed; and the almost incredible triumph of sanitation over bubonic plague in its subterranean stronghold under San Francisco.

Though much has been accomplished, it is only the beginning. It merely points the way to the final goal, which should be nothing less than the absolute eradication of recognizable infectious germs. The causes of most of the diseases above mentioned, and of many others unenumerated, can be, and should be, swept from the face of the earth. Hydrophobia is almost unknown in North Germany. The reason is obvious. All dogs are muzzled; if one runs mad the poison dies with him. For yellow fever and malarial diseases the mosquito bar is analogous to the muzzle for hydrophobia. Infection can be prevented from escaping. Against every germ there can be found a means of protection.

The means necessary to accomplish the desired end are already recognized in many instances. It is a most important element of any enterprise to know what is needed. The writer believes that, in this instance, what is needed is dissemination of knowledge that will enable the people, lay and professional, to understand and apply the principles of sanitation, antisepsis and asepsis, in order to avoid or destroy the germs of disease. No organization, however worthy or sincere, can hope to accomplish any general or national object unless supported by an enlightened public opinion. In this matter, a mere national coöperation would not suffice. To rid the world of consumption and typhoid requires international coöperation, only to be hoped for when founded on international enlightenment. To eradicate the germs of those diseases from our country alone would necessitate a perpetual and almost impossible quarantine against reinfection. Much easier than this would it be to render the movement international from the beginning.

We have before us an object lesson of great value. When the Woman's Christian Temperance Union was organized it was soon realized that the strength of such a movement must reside in an educated public opinion. To meet this indication abundant literature was distributed and able lecturers provided to arouse public interest. The press was utilized to the utmost possible extent. The most effectual and permanent measure, however, was the introduction of text-books on physiology, written with a special view to inculcating the society's peculiar views concerning alcoholic beverages, into the public schools. By exerting an organized influence on school boards, legislatures and public officials, an influence backed by an appreciable number of political votes, they forced these physiologies into the curriculums of a large proportion of our public schools. Few publishers of school books could now afford to risk the boycott on all their publications that might follow their issue of a text-book on physiology which differed in its treatment of the effects of alcohol from the standards prescribed by the W. C. T. U.

What has been accomplished by an organization whose object is almost an impossibility, an object, moreover, that is hotly opposed by perhaps a majority of mankind, may surely be equaled by a similarly organized body whose object will meet with universal sympathy and approval; for every one must approve of an effort to banish disease and suffering.

Assuming, then, that the object is worthy, and within the bounds of possibility, the next question is, what step should be taken for its accomplishment? It seems to the writer that this Association should appoint a special committee to investigate the matter, inquire into all the possibilities, and report at the next session. This committee should be instructed to decide whether it would be better to create a special bureau within the American Medical Association, having international connection with similar bureaus to be created by the national medical organizations of other countries in order to unify the work; or to organize an independent association under some such title as "The International Sanitary Union," to which all sympathizers, male or female, young or old, lay or professional, would be eligible as members, making it a popular movement from the beginning. In case the former plan is preferred, some kind of membership should be provided for the laity. The church, the educational associations, and, above all, the boundless influence of woman, must be enlisted if success is to be assured.

The three indispensable conditions are: (1) International sanitary organization; (2) international sanitary education; (3) international sanitary legislation. Organization, though the first necessity, is merely a means to the great end, enlightenment.

The root of the whole matter is education. Organization can provide lecturers. newspaper articles, essays, pamphlets, societies, badges and all the paraphernalia for rousing public interest in every civilized land; but far more powerful in its effects would be a chapter on

"The Prevention of Disease" in every school text-book on physiology, in every printed language the world over. In every school grade, from the lowest to the highest, the plain, untechnical statement of the facts would instill into the minds of rising generations the principles that would insure intelligent coöperation with all our efforts for the benefit of humanity.

All this literature for text-books, whether in English, French, German, Spanish, Italian, Russian or Japanese, should bear the stamp of their national medical organizations, and would, therefore, be authoritative. Educated thus from early youth in the simpler and fundamental truths of pathology, the coming generations would be armed against fallacious theories of disease, to say nothing of the effect such enlightenment would have on the fads continually springing up to impose on the people. One who is posted concerning the Klebs-Loeffler bacillus and its toxin, will hardly be tempted to rely on prayer alone for the rescue of a child stricken with diphtheria.

Meanwhile there is no necessity to wait for another session before beginning the work. The seed must be cast on the waters with a liberal hand, and the sooner the better. The officers of the committee to be appointed, or at least the secretary, should be provided with sufficient funds to enable them to enter into correspondence with national medical organizations in other lands, and to distribute appropriate literature among the clergy and prominent educators. Sample literature, proposed to be inserted in text-books, for the different school grades, should be submitted to prominent educators for suggestions or approval. Our publishing facilities at Chicago will enable us to do most of the necessary printing at nominal cost. The daily press should be judiciously used to arouse and maintain the interest of the public, and the ground so carefully and thoroughly prepared that when, at our next meeting, the final form and title of the effort is accepted and announced, the people will be ripe for action.

The effort is a noble one, worthy of the grand organization under whose auspices the writer hopes to see it inaugurated. Perhaps there may be opposition, though it is hard to say why there should be; but the right is greater than any man, however exalted, and will surely prevail. Sooner or later, the conditions herein suggested will be put into effective operation. There is not a single reason why the first step should not be taken at this session of the Association. In twenty years from now we will be no more ready for that first step than we are to-day. If we take it now, twenty years will find us far on the road to the goal, with some diseases eradicated, some diminished, and all under control; with a citizenship too enlightened to be duped by the Eddys and Dowies, too wise to allow helpless or careless sufferers to scatter broadcast the seeds of death. When preventive medicine has accomplished this task typhoid will be no more, malaria a curiosity, yellow fever a matter only of history, and the few accidental consumptives will bask in comfort in government sanatoriums among the sheltered valleys of the Rocky Mountains; while mankind at large will no longer look with dread on three-score and ten years, but will hopefully regard the century mark as about the proper thing. Let no thinking man dismiss this matter as visionary and impracticable. The necessary steps are plain and possible, and will inevitably lead to success if we rise to the level of our opportunity, and earnestly, without haste and without rest, pursue this, the true and final goal of preventive medicine.

This paper is brief because it deals only with fundamental principles. Matters of detail are hardly mentioned. The amount of ground to be covered at the beginning, whether the germs of one, two or three diseases; the varieties of appeal required, some for the scientific, others for the uneducated but practical, and still others for the enthusiasts, all these and many more matters are left for the consideration of the men into whose hands the subject may be confided. The field is wide. There is work for a lifetime. But to what loftier, nobler cause could a man consecrate his powers? No other profession or calling can vie with that of medicine in altruistic devotion to the welfare of humanity. This is the summit of our efforts, the *ne plus ultra* beyond which there lies no further possibility. Let us secure to our Association the glory of the attempt.

SPECIAL INFLUENCES OF THE HIGH ALTITUDES ON THE NOSE AND THROAT.*

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COLORADO SPRINGS, COLO.

The subject has, unfortunately, to be considered largely from the standpoint of hypothesis and theory, as at present the facts do not admit of absolute proof. Personally, as a physician without numerous hospital cases to study or a physiologic laboratory to experiment in, I find it impossible to prove the truth of the theories I may entertain in this matter. Though my opportunities for observing these phenomena have been comparatively few at any one time, they have extended over some twenty-eight years of practice in Colorado, and, therefore, have the value of single spies, though they can not have the weight of battalions.

In rhinologic practice in Colorado one is struck with the fact that patients arriving from sea level often complain of nasal symptoms of which they had not been conscious at home. The reasons for this undoubted fact appear to me as follows: In the first place, the altitude causes a marked reduction of atmospheric pressure on all parts of the body, and consequently a greater fullness of the blood vessels of the skin and of the mucous membranes which are exposed to the air. As a result, there is a physiologic congestion of the blood vessels of the nasal cavities, especially of the erectile tissue of the turbinate bodies. Under these conditions it often happens that when a person is transported from sea level to a high altitude, in whom there exists some narrowing of the nasal passages, due to the presence of a septal deflection or spur, or to an hypertrophied turbinate, or a neoplasm, that the increase of the stenosis caused by this physiologic engorgement of the proximate tissues makes him conscious of a nasal deficiency, of which he may have been previously entirely ignorant. This person then feels his nose stopped up and perhaps suffers also from the induced nasal pressure and so passes under the observation of the rhinologist.

As a consequence of this stenosis there is produced a local suction effect as the air passes in and out. While the entire corporeal surface is placed as it were under a cupping glass, the area of stenosis is under a limited but much more powerful cupping glass.

Thus occur local conditions which establish a catarrh, unless the equalization of the general blood pressure, which takes place in a few weeks, that is, after accli-

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matization is established, causes a sufficient subsidence of the local turgescence, or unless relief is effected by treatment. But if the catarrh is unchecked there will ensue a complete and permanent stenosis from a chronic inflammation and enlargement of the proximate turbinate body.

Thus far we have dealt only with the influence of the rarefaction of the air, but there are other influences. The air at an altitude is not only rarefied, but it is exceedingly dry, so that the nasal mucous membrane is called on to yield up moisture to it much more largely and rapidly than at sea level. Consequently the normal mucoid fluid, which should bathe and lubricate the nasal tract, becomes inspissated, forming crusts on the surface and so giving rise to further obstruction, and culture mediums for germs are established. Thus pus is formed and ulcerations appear.

With the dryness of the air comes dust; not dirty but irritating dust, largely composed of minute sharp particles of granitic detritus, of mica, etc. This increases the local inflammation.

Another climatic factor always present in high climates is the wide range and the rapid changes of temperature between day and night, and between sunshine and shadow. In most localities there is also a constant movement of air and shifting of the wind, and on exposed plateaus or in mountain passes, high winds. Owing to the stenosis of one nostril brought about in this way, there develops a hypertrophic catarrh of the other nostril as a result of its having to work double tides.

Behind the influence of the climate on the circulation and exosmosis of the nasal mucous membrane, there is its direct one on the nervous supply of the nose. In the first place the climate stimulates the energy of the whole nervous system and so makes the nasal nervous mechanism more normal and more active, and also more sensitive in its response to stimuli. The overwork and fatigue brought about by the ineffectual efforts to overcome the physiologic and pathologic conditions described, result in more or less vasomotor paralysis, thus the temporary congestion becomes chronic and is greater than before. As a consequence of the resulting nasal stenosis, mouth breathing and catarrh of the nasopharyngeal and laryngeal membranes usually develop.

We have briefly dwelt on the injurious influences of the climate on certain pathologic conditions. Now, let us consider what can be done to mitigate them. Topical treatment by sprays, ointments or direct applications to modify the local congestions may in slight cases remove them, but generally such remedies are only of temporary benefit. Cauterization of a turbinate may sometimes be effective, but in many cases permanent relief will only come after surgical procedure has removed the structural causes of the stenosis.

When the catarrhal change in the membrane is slight after operation the catarrh will disappear, but when it is extreme, the cases improve much more rapidly and surely in a more moist atmosphere and on a lower level. Such cases after a time may return to the high ground and keep well.

In most cases in which there are local causes for a catarrh, there are also systemic disorders which aggravate it. When these disorders are of a nature which a high climate tends to relieve, there is naturally a more rapid and sure cure of the catarrh after appropriate local measures have been carried out, than would have ensued from similar local treatment at sea level.

Atrophic rhinitis is, in my opinion, usually made worse by a high climate, in which view I have the support of my colleague, Dr. Gildea, but, on the other hand, so high an authority as Dr. Levy takes the opposite view. Undoubtedly, the victims of this disease are often benefited in their general health by the tonic effects of the climate. But it stands to reason that with their wide open noses the dry rarefied air taxes to the utmost their defective capacity for moistening and warming the incoming air and far more than does a moist atmosphere with a high barometric pressure.

I have also observed that those cases which have previously had portions of the turbinates or septum too freely removed, suffer much more discomfort in high than in low climates.

It has been said that Colorado cures those who come with catarrh and induces it in those who come without it. The apparent reason for this statement is that undoubtedly a flabby weeping nasal membrane is much benefited, while a dry, irritable membrane suffers because its secretion which was sufficient at sea level is too scanty in a high climate.

CONCLUSIONS.

To sum up it may be said that:

1. Surgical measures are often demanded at an altitude in cases which had previously gotten along comfortably without it at sea level.

2. The results of such procedure are at least as satisfactory as elsewhere, but more than usual care must be taken to save all secreting tissue.

3. The local symptoms of atrophic rhinitis are aggravated, though the constitutional conditions are often markedly improved.

4. The moist form of hypertrophic rhinitis is much improved.

In disease of the accessory sinuses, if the appropriate relief is given, the affected surfaces dry up and heal more rapidly and surely than at sea level. In this respect the result is the same as is well known to be the case in the healing of other wounds and ulcerations.

With regard to surgical cases treated at an altitude, nasal or otherwise, it is undoubtedly true that they do better and require less postoperative care than at a low level.

There appears also to be an absence of the danger of infection to the wounds inflicted on tuberculous cases, which is usually so much dreaded elsewhere.

Thus far our discussion has been limited to the influence of altitude on the nose. We will now briefly consider its effects on the throat. In the first place it may be said that in most instances what affects the nose also affects the throat. This applies to disorders whether of local or systemic origin. The limits of this paper do not permit a full discussion of the influence of the climate on tubercular laryngitis, but it may be here stated that the experience of the writer and most of his colleagues is that it is decidedly favorable. Of course, it is recognized that tubercular laryngitis is for the most part an expression of a tendency of the tuberculosis to spread, and that the great majority of the cases die from their pulmonary tuberculosis, yet the narrow margin of recoveries is less narrow when the cases are treated in a high altitude, and that local treatment is much more successful than at sea level.

The tonic and stimulating effects of the climate, both direct and indirect, are as markedly beneficial to local

and general anemia as they are irritating to plethoric and hyperemic conditions.

DISCUSSION.

Dr. Melville Black, Denver.—I would be inclined to consider the dryness of the climate the most important in its effects. In the beginning the immediate effect is very largely that of reduced atmospheric pressure, producing temporarily a sort of vasomotor paresis; at least the patient has the symptoms of such in a mild form. This passes off after a few weeks. Our relative humidity is something like 49 per cent. The relative humidity in New York is 75 per cent.; San Francisco, 75 per cent.; Portland, Ore., 80 per cent. So that you see the relative humidity at sea level is about double that of Colorado. When we say the average is 49 per cent., that does not represent the humidity as it usually is. The morning and evening humidity is greater than that during the day, but it brings up the figures of the statistics. At noon it probably would usually run not higher than 20 or 25 per cent. Therefore, in Colorado the nose has to do fully double the work required at sea level in order to bring the inspired air up to a point of saturation. The prevalent complaint of all of our residents is of dryness. When we come down to New Orleans we find that our noses feel unusually comfortable. I think Dr. Solly will bear me out in this. We have hypertrophic conditions as the result of the increased function, followed by a form of mild sclerosis. Septal deviations and other conditions, which would naturally contribute to make it more impossible for the nose to perform its normal functions, require operation more in Colorado than elsewhere. I do not think Dr. Solly or myself would like the impression to go out that we have a climate that is particularly prolific in the production of "catarrh." I have never seen anything serious from it. I do not believe our climate will help dry nose and middle-ear conditions. When patients are to be sent to Colorado for otitis media, catarrhalis chronica these factors should be considered.

Dr. H. W. Loeb, St. Louis—One feature of the paper is of especial moment to me, coming so soon after the rather unequivocal statement made by Levy at Washington last year, that laryngeal tuberculosis is improved in Colorado. The fact that the patient has laryngeal tuberculosis should not militate against sending him to Colorado. Until last year my practice has been to tell such patients that nothing in the way of hope is offered by Colorado or any other climate after the larynx is affected. This coincides with what some of the German authors say on the matter. But since last year it has been my practice to send the cases of laryngeal tuberculosis to Colorado. The Colorado members of our specialty feel that in Colorado there is some hope for these patients.

Dr. Sargent F. Snow, Syracuse, N. Y.—I now find it unnecessary to treat my cases of laryngeal tuberculosis locally if the pulmonary conditions are urgent, but immediately send them where they get dry pure air. If they are in an early stage, so far as the pulmonary condition is concerned, I treat them locally for a while. I have sent to the Adirondacks five cases in which there were marked ulcerations and infiltrations of the larynx, and they have all healed up perfectly and have good restoration of function. In cases with the peculiar hard spasmodic cough, an examination of the vault of the pharynx will show a granulated condition, sometimes an intensely irritated area, on which crusts form, and if this be treated with applications of nitrate of silver, 40 grs. to the ounce, we give them very great relief. But I do not think we are justified in keeping these patients in their home environments for local treatment. Get them as soon as possible into higher and drier climates. I feel sure that 2,000 feet is a better altitude than 500, but I have had only a limited experience with altitudes greater than 2,000 feet.

Dr. S. E. Solly, Colorado Springs—We are very firmly impressed by the remarkable results we get in Colorado, particularly when we have to use operative measures in the larynx and throat, which we find can be carried on there with much less risk and with better results than are usually obtained at sea level. Moreover, there is apparently much less danger of a laryngeal wound becoming infected by tuberculous sputum passing over it.

ARRESTED TUBERCULOSIS.

SUBSEQUENT HISTORIES OF SEVENTY-NINE ARRESTED CASES TREATED AT THE SHARON SANITARIUM FROM 1891 TO 1902.*

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BOSTON.

Four years ago I had the pleasure of giving the subsequent histories of thirty-four "arrested" cases of pulmonary disease treated at the Sharon Sanitarium from 1891 up to 1899.[1] I will not apologize for bringing up the subject again, for all will agree that it is the after-histories of such cases which prove the efficacy or otherwise of methods which are now so prominently before the public.

Let me again cite the fact that these results have been obtained in a climate thought to be most unfavorable for consumptives, not far from the sea-coast and at the insignificant altitude of between 200 and 300 feet only above sea-level. In these latter particulars the Sharon Sanitarium was for several years unique. During recent years, Dr. Millet's sanatorium at East Bridgewater has been built with similar conditions, although it is intended for patients who are of a more well-to-do class than those at Sharon, where only patients of limited means are received. The State Sanatorium at Rutland, opened in 1898, has an elevation of 1,100 feet, and is fifty miles from the sea.

Again let me refer to my use, up to the present time, of the term "arrested," which has included all those cases in which abnormal outward symptoms have disappeared, many of them having justified the more favorable terms used by some authorities, "apparently cured" or "cured," at the time of discharge.

Since my last paper, the institution has been enlarged from the capacity of nine to twenty-one beds.

The total number of cases discharged since the opening of the institution in February, 1891, up to April 1, 1902, is 182. Five of these remained but a few days, and were not under treatment, and 13 were cases of asthma or simple bronchitis; therefore, 18 are not considered in the results.

In tabulating the remaining 164 cases which are considered, I have allowed a year to elapse since the last one of the number was discharged.

Seventy-nine of these 164 cases were recorded as "arrested," a percentage of 48.17+ of all the phthisical cases.

Of these 79 cases, which include those mentioned in my report of four years ago, 12, or 15.2 per cent., have died since leaving the institution, after varying intervals of comparative health.

In my previous report, 6 out of the 34 "arrested" cases had died. In that paper, I gave the probable reasons for the relapse and explained that in one the cause of death was from shock during some uterine operation, no trace of previous pulmonary disease having been noticed by the attending physician previous to the patient's

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* Read before the American Climatological Association.

1. Subsequent Histories of Arrested Cases of Phthisis Treated at the Sharon Sanitarium. Boston Med. and Surg. Jour., June 22, 1899. Trans. Amer. Climatological Assn., 1899.

TABLES OF CASES OF

	Case.	Occupation.	Entered.	Stay in San.		Diagnosis.	History.	Hemoptysis.
1	1. M. S.	Typewriter	2, 16, 1891	4 months.		Adv. ph.	Run down 5 years; cough; sweats; ph. family history	
2	3. A. P. E.	Teacher	3, 31, "	5 "		Ph	Ph. history on father's side; cough 8 months; sweats and dyspnea	+
3	4. A. McD.		5, 27, "	2½ "		Incip. ph	"Throat irritation" 4 to 5 years	?
4	9. J. W.	Housework	6, 24, "	3 "		Pulmon'y and laryngeal tbc.	Cough and hoarseness for a year	?
5	10. I. W. S.		7, 7, "	12 "	—	Incip. ph	Mother died of ph.; cough 9 months; dyspnea	+
6	20. N. M. B.		10, 6, "	6 "		" "	Cough 18 months; pain on r.	0
7	24. G. E. M.	Box factory	11, 28, "	4 "		" "	Mother had (?) ph.; cough 2 years, off and on	+
8	27. J. A. McD.	Tailoress	4, 13, 189?	5½ "		" "	Ph. on mother's side; hemoptysis three weeks before; dyspnea eighteen months.	+
9	28. M. L. L.	Housework	4, 13, "	5½ "		" "	Pain between shoulders 1 year; cough 1 month	?
10	31. A. R. L.		5, 31, "	12½ "		" "	Ph. marked in family history; cough 1 months	+
11	33. L. A.	Box factory	7, 23, "	23 "		" "	Cough 1 year; dyspnea; sweats	+
12	36. L. H.	Bookkeeper	10, 4, "	32 "		" "	Mother d. of ph.; four of mother's family of ph.: hemoptysis 8 weeks before.	+
13	37. L. McL.	Dressmaker	10, 8, "	4 "		" "	Bronchitis 9 years before; poorly since; cough 1 year	0
14	41. F. A. B.		1, 14, 1893	11 "		Ph	Ph. on mother's side; cough 6 months; dyspnea	+
15	42. S. C.	Domestic	1, 25 "	21 "		Incip. ph	Sister d. of ph.; cough 6 months; pain r	
16	49. H. Q.	"	7, 27, "	14 "		" "	Two brothers and two sisters d. of ph.; told 5 years before she would not get well of ph.	+
17	50. M. M. S.	Saleswoman	10, 25, "	5 "	+	" "	Slight cough over 1 year; hemoptysis	+
18	51. M. W.	Housework	1, 31, 1894	14 "		Ph	Mother d. of ph.; pneumonia 4 years before with pain since; cough 18 months.	+
19	53. R. B.	"	5, 14, "	13 "		Incip. ph	One brother d. of ph.; 11 brothers of father d. of ph.; cough and pain 9 years.	0
20	59. E. V. M.		7, 30, "	21 "		" "	Mother d of ph. and 1 sister; cough 2 years	+
21	63. M. J. T.	Housework	11, 8, "	2½ "		" "	One aunt d. of ph.; cough 2½ months; sweats	0
22	64. L. E. W.	Dressmaker	1, 2, 1895	4 "	—	Anemia, incip. ph.	Two uncles and 1 aunt d. of ph.; "typhoid" 6 years before with slight cough since.	0
23	65. H. K.		1, 8, "	4 "	—	Incip. ph	Run down 18 months; occasional cough	0
24	68. D. S.	Housewife	5, 5, "	17 "		Ph	Cough off and on 3 years	0
25	79. J. C.		4, 30, 1896	3 "		Incip. ph	Three of father's family d. of ph.; bronchitis 18 months before with occasional cough since.	0
26	80. M. B.	Attendant	5, 8, "	13 "	—	" "	Cough 4 months	+
27	81. B. M.	Cashier	5, 25, "	15½ "		" "	Father, mother and 2 brothers d. of ph.; cough off and on 10 months; — esp. + 3 months.	0
28	82. A. G. C.	Housework	6, 2, "	1½ "		Anemia, ph.?	One sister d. of ph.; run down 6 months; O cough	0
29	84. N. A. C.	Bookkeeper	7, 4, "	13 "	—	Incip. ph	Cough 6 months	0?
30	85. A. K.	Stenographer	8, 6, "	9 "	—	" "	Cough 5 months	0
31	88. M. E. A.	Librarian	12, 12, "	9 "		Ph. (fibroid?)	Mother and mother's mother d. of ph.; frequent cough 10 years	0
32	93. S. K. C.	Waitress	3, 15, 1897	8 "		Incip. ph	One sister d. of ph.; hemoptysis 21 years before; cough 1 year	0
33	94. J. E. P.	Seamstress	5, 21, "	3½ "		" "	Two sisters d. of ph.; cough 2 years	0
34	95. M. M. N.	Cook	7, 2, "	2 "		Pleurisy without eff.	Pain in chest 2 years before; O cough	0
35	99. J. A. M.	Housewife	10, 6, "	11½ "		Incip. ph	Two aunts d. of ph.; cough 4 months	0
36	101. C. B. M.	Teacher	10, 30, "	6½ "		" "	One uncle d. of ph.; cough 6 months	+
37	102. A. N.	Maid	12, 1, "	3½ "		" "	Cough 2 months; profound anemia	0
38	104. F. C.	Dressmaker	1, 27, 1898	21½ "		" "	Slight cough 5 months	+
39	108. N. L. C.	Clerk	6, 9, "	3 "		" "	Father d. of ph. and all his family; cough several years	+
40	110. I. W.	Housework	6, 20, "	year		" "	One sister d. of ph.; cough 1 year; pain across chest front	+
41	111. A. K.	Teacher	7, 7, "	years and 2 months		Incip. ph. T.B. of bladder.	Cough 15 months	+
42	112. A. N.	Mission	7, 11, "	year		Incip. ph	Cough 21 months; sweats; pain on l.	0
43	114. A. B.	Stenographer	10, 25, "	8½ months		" "	One brother d. of ph.; cough 9 months; dyspnea	+
44	115. M. G. T.	Teacher	10, 31, "	7½ "		" "	One sister d. of ph.; pain r. 9 months before with cough	0
45	116. L. G.	Maid	11, 22, "	11 "		" "	Cough 6 weeks	0
46	120. S. B. F.		7, 19, 1899	14½ "		" "	Mother and sister d. of ph.; cough 1 year; sweats	0
47	122. A. D.	Nursegirl	11, 23, "	11 "		" "	One brother and 1 sister d. of ph.; cough 4 weeks; sweats	+?
48	123. M. M.	Maid	12, 14, "	3½ "		" "	One brother and one sister d. of ph.; pain l. 3 years before; cough 2 months.	0
49	124. M. L.		1, 9, 1900	4 "		Pleurisy; incip. ph.	Pain on r. 3 weeks with cough	0
50	125. M. N.		1, 30, "	5 "		Incip. ph	Pneumonia(?) 2 years before; glands removed 3 years before; occasional cough.	+
51	126. M. G. D.		5, 29, "	11 "		Well-marked ph.	One sister d. of ph.; cough 10 months before	0
52	127. E. A. McG.	Nursemaid	6, 12, "	7 "		Well-marked ph.	Pneumonia 6 years before; cough 3 months	+
53	129. L. B. W.	Housewife	9, 14, "	7 "		Ph	Father d. of ph.; cough 3 months	+
54	130. M. E. S.	Cotton mill	10, 13, "	6 "		"	Father, 2 brothers and 2 sisters d. of ph.; cough 2 months	0
55	136 F. A. L.	Housework	10, 22, "	8 "		"	One sister, 1 aunt and 1 uncle d. of ph.; cough 3 months; sweats	+
56	139. M. T.	Dressmaker	10, 24, "	5 weeks		Incip. ph	Cough 18 months with occasional hemoptysis	+
57	140. M. V.	Housewife	10, 24, "	5 "		" "	One uncle d. of ph.; cough 8 months	0
58	144. M. A.	Bookkeeper	11, 5, "	5½ months		" "	Cough 3 years before; O at entrance	0
59	144. E. A. D.	Housewife	12, 5, "	8½ "		" "	Cough 4 years with occasional bloody sputa	+

ARRESTED TUBERCULOSIS.

Physical Signs.	T. B.	Years Since Disch.	Date of Death.	Present Condition.	Present Occupation.	Remarks.
Dul. r. apex; clicks both sides	+		1897; 6 years after discharge.	*Dead*		Had two tapeworms later; swallowed ammonia by mistake; grippe; relapse.
R. front dull to fourth rib and all over r. back; slight crackles after cough.	+		Dec. 31, 1892; 15 mo. after disch.	*Dead*		Died of acute illness; sick 2 3 days; resumed teaching, against advice, in badly ventilated building.
Slightly jerky at r. apex	0	12—		Good Feb. 20, 1903	Hat factory	
Dul. r. top with tubular resp.; clicks r. lower front.	0	12		"	Housework	
Slight dul. r. apex with faint râles; also râle on l., esp. in back.	0	11—		" Feb. 20, 1903	"	Married 6 years; 3 children.
Slight dul. r. apex with b. v. resp. and (?) râle.	0	11		" " " "	"	
Nothing abnormal	0	11		" Jan. 1, 1903		Married and has 1 child; proved later to be tubercular, but now well.
Slight dul. l. apex with rare râle to third rib; rare râle on r.	0	10½		" Feb. 20, 1903	Housework	Married; has 2 children.
Slight dul. r. apex with faint râle front and back; V. R. +.		10½		" " " "	"	Married.
Slight dul. l. apex with râle above l. clavicle and low r. back.	0	9 -		" " " "		
Slight dul. r. apex with slight B. V	+	9—		" 1903	Nurse	
O dul.; coarse clicks both apices	+	8		" Feb. 20, 1903	Housekeeper	
O dul.; faint râle r. apex and lower r. axilla.	0		1895; 2 years after discharge.	*Dead*		Resumed unhygienic occupation.
Slight dul. lower r. back with faint br. and occ. râle; (?) râle at top.	+		July 4, 1895; 18 mo after discharge.	*Dead*		Returned to very damp house; remained well while away.
Slight dul. r. apex with ? râle	+		Dec., 1895; 1 year after discharge.	*Dead*		Died from operation; no trace of pulmonary disease found just before death.
Slight dul. mid. r. back with faint râle	+	8½		Excellent	Maid	
Sl. dul. in r. apex and in lower r. back; obscure resp. ? crep'n anter. axillary.	+	8		" 1902		
Dul. r. apex with fine râle V. R. +; also râle on l.	+		Mar. 23, 1900; 5 yr. after discharge.	*Dead*		Well for 2 years after discharge; overwork brought on relapse.
Slight dul. r. apex without râle	0	8			Housework	Health good at last report, 3 years ago.
Slight dul. r. apex with faint râle; V. R. + both sides.	+	7		Good, Dec., 1901	"	
Slight dul. both apices; ? râle by sp. l. scap.	0		Dec., 1897, 1 year after discharge.	*Dead*		Readmitted June 13, 1895; T. B. found then; unsan. surroundings; hard work.
Slightly harsh both tops back; ? râle sp. both scap.	0	8		Good, 1902	Dressmaker	
B. V. and V. R. + both tops; râle l. apex	0	8		Good accounts last report.		No report received of late.
Dry râle l. top; faint râle r. top	+	7—		Good, Jan. 14, 1903	Housewife	
B. V. resp. in apices	+	7—		" 1902	Housework	Discharged improved; arrested later.
Faint moist râle above r. clav. and spine scap. with b. v. resp.	+	6		" Jan. 14, 1903	Keeps boarding house.	
Slight dul. r. apex; faint râle l. apex	+		1903, 5½ years after discharge.	*Reported dying* Jan., 1902.		Readmitted; remained well 3 or 4 years after discharge; remarkable case.
Resp. prolonged r. apex behind	0	7		Good, Jan. 14, 190	Housework	
Resp. + r. apex; V. R. +; râle l. apex	0?	6—		" " " "	Bookkeeper	
Slight dul. apices; fine râle in bk. and at l. scap.	+	6		" " " "	Nursing	
Dul. with b. v. r. apex; fine râle l. front low l. bk.	0	6—		" " " "	Housework	Readmitted for 7 months; married later.
Dul. apices and l. right bk.; crep. in low r. bk.	0	5+		" " " "	Waitress	
Clicks above each clav.; b. v. in r. apex bk.	0	6—		" " " "	Dressmaker	
Dul. with rub. lower two-thirds r. chest	0	6—		" " " "	Housework	Married; 1 child.
Dul. with râle and ? rub. low l.; ? râle in r.	+	4½		" Feb. 20, 1903	Clerk	
Dul. r. apex with V. R. +; faint click above each clavicle.	0	5		Good, Feb. 20, 1903		
Slight + pitch r. apex	0	5		" " " "	Cook	
Dul. upper half r. back without râle	0	3½		" Jan. 14, 1903		Says grows stronger each year.
Note + over r. bk.; ? crep. below l. scap.	0	4½		" " " "	Housework	
O dul.; ? râle low r. and l. back	0	4		" " " "		Married; 2 children.
Dul. r. apex; slight b. v. and V. R.; sl. +	+	1½		Fair, " " "	Teacher	Had urinary tuberculosis also.
Percussion dull both apices; resp. and V. R. + on r.	0	4		Good, Feb. 20, 1903	Mission	Married; 1 child.
Dul. r. apex and slight on l.; râle r. bk. and on l. at top.	+	4—		" Jan. 14, 1903	Housework	Married.
Dul. + r. bk. and axilla with dim. resp. and ? râle; ? râle r. top front.	0	4—		" " " "	Teacher	
Dul. r. apex with râle in front	0		1900	*Dead*		Complicated with mitral disease; lived in damp house; relapse.
Slight dul. l. apex without râle; râle r. apex.	0	2½		Good, Jan. 14, 1903		
O dul.; sonorous râle all over l.	+	2½		" " " "	Stitcher	
Slight dul. l. top with faint râle and b. v. — less degree on r.	+?	3		" Nov., 1901	Maid	
Slight dul. r. top and base front and back; faint râle at base.		3		" Dec. 26, 1901	Housework	
Jerky low l.	+	3—		" Jan. 14, 1903	Student	
Dul. both tops behind; râles all over l.; ? r. top.	+		Jan. 4, 1903, 2 years after discharge.	*Dead*		Arrest of disease unexpected; remained well several months; sudden decline.
Dul. both tops with râles +	0		Jan. 21, 1902, 1 yr. after discharge.	*Dead*		Died of phthisis; had been in sanitarium for some time without cough and for sometime after discharge; died suddenly.
Dul. r. top with clicks, esp. in bk	+	2		Good, Jan. 14, 1903	Factory	
Slight dul. l. top with râles; also in l. axilla râle.	+	2		" " " "	Clerk	
Slight dul. r. top with râle; faint râle on l. top.	+	2—		Poor, " " "		
Slight dul. both tops with faint râle l. front and ? l. bk.	0	2½		Fair, " " "	Dressmaker	Went away much too soon, against advice.
Slight dul. both tops with faint râle above clav.	0	½		" " " "	Housewife	Went away much too soon, against advice.
Slight dul. apices, esp. l.; rare wheeze r. top and low r. bk.	0			Good, " " "	Bookkeeper	
Jerky l. apex; fine râle 3d l. interspace and opp. mid. l. scap.	+			" " 16 "	Housework	

TABLE OF CASES OF

	Case.	Occupation.	Entered.	Stay in San.	Diagnosis.	History.	Hemoptysis.
60	149. E. C. C.	Student	12, 26, 1900	5⅗ months	Adv. ph	Cough 8 months; sweats	0
61	150. A. R.	Stitcher	1, 7, 1901	4⅗ "	" "	Hemoptysis 10 months before; cough 11 months	+
62	152. S. G. P.	Milliner	1, 26, "	4 "	Incip. ph	Subject to cough always, esp. last 2 weeks; sweats	0
63	153. A. J. F.	Housewife	2, 11, "	3½ "	" "	Hemoptysis 8 months before with cough	0
64	154. S. A. S.	"	3, 9, "	6 weeks	" "	Cough 3 months with bloody sputa; sweats	+
65	156. M. A. C.	Machine operator	4, 4, "	6½ months	" "	Pleurisy 1 year + before, with cough since	0
66	158. E. G.	Typewriter	5, 3, "	4½ "	" "	O cough; slight pain up l. front	0
67	160. A. M. M.	Teacher	5, 9, "	5 "	" "	Cough 1 month; slight dyspnea	0
68	161. K. G.	Nurse	5, 15, "	4 "	" "	Pneumonia 3 weeks before; sweats	0
69	163. B. B. O.	Stenographer	5, 17, "	8 "	Well-marked ph.	Pneumonia 7 months before; sweats	0
70	164. J. M. M.	Hairdresser	5, 23, "	3⅗ "	Incip. ph	Running down 2 years; no cough	0
71	171. A. T. M.	Housewife	6, 15, "	5¼ weeks	" "	No esp. chest symptoms	0
72	172. R. J. F.	Maid	6, 17, "	3 months	" "	Cough 2 years; sweats 1 year before	0
73	174. L. E. W.	Housewife	6, 22, "	1⅗ "	" "	Occasional slight hemoptysis; O cough	+
74	176. A. N. G.	Nurse	7, 30, "	7 "	" "	Run down for 4 years; sweats 2 years before	0
75	179. L. E. K.	Bookkeeper	9, 19, "	2½ "	" "	Cough 12 years	0
76	181. M. A. McK.	Housework	9, 21, "	5⅗ "	Well-marked ph.	Pneumonia about 3 years before; cough 3 months; sweats	+
77	182. M. G. M.	"	9, 23, "	2½ "	Incip. ph	Cough 2 months; sweats	0
78	183. G. A. O.		9, 27, "	2½ "	Tub. adenitis	Bunches in neck 2 years; O cough	0
79	188. F. R. G.	Housework	10, 23, "	4 "	Incip. ph	Cough 1 month	+?

death. In the other 5 a return to unhygienic surroundings had brought about a relapse in patients who had on entrance marked symptoms of disease varying in extent and severity, and in whom any arrest of disease was thought on entrance to be improbable.

Since that time two more of those then reported (Nos. 18 and 27 of the following list) have died, both of whom had had well-marked disease in one or both lungs before entrance, and in whom the arrest was a remarkable proof of the efficacy of sanitarium treatment. One of these returned to a life of drudgery with four small children and no servant to assist her. She remained very well for two years at least, but finally broke down and died five years after discharge. The other, all of whose family had died of phthisis, remained in excellent health without any abnormal symptoms, in spite of hard work in Boston and in Florida for three years. After marriage she broke down again. Her cough returned. She again entered the sanitarium, where her cough again ceased completely for several months, but in consequence of a severe cold last autumn she had another relapse, failed rapidly, and died this winter in Florida.

The histories of the remaining 4 of the 12 who have died are significant. Only one (No. 45 of the following list) was what can be called an "incipient" case, with râles at one apex, complicated with severe mitral disease which rendered the treatment more difficult. An arrest of the cough and expectoration was accomplished, but on return to a damp, unhealthy house, the patient relapsed, rapidly failed, and died not long afterward. Two others (Nos. 51 and 52) had well-marked symptoms in both lungs, but remained two or three months in the sanitarium without cough or other abnormal symptom, and for months after discharge were in excellent health. For reasons not fully explained, however, both these cases suddenly developed serious symptoms again, and died one and two years after leaving the sanitarium. The remaining case (No. 61) had far-advanced disease in one lung. After a stay of 4¾ months at Sharon she left without any abnormal outward symptom, looking perfectly well, and remained so for several months; but a return to objectionable methods of life in the city brought on a relapse, and she died in 1902.

Of the remaining 67 "arrested" cases, excellent accounts are received with only one or two exceptions, the former having sent no report at all of recent years. She was known to be feeling well at last accounts. The latter, a case of fairly well-marked disease, has failed in strength, and doubtless will sooner or later succumb to the disease. The majority write enthusiastically of their good health, some of them having left the sanitarium ten years ago. All are employed in their homes or in occupations which, as a rule, allow them to be out of doors more than before.

It would be impossible, of course, to give each case in detail to you here. A tabulation will be made with the published paper whereby one may judge fairly well for himself of the results claimed. For the laborious and careful preparation of these tables I am greatly indebted to Dr. Walter A. Griffin, the resident physician at the sanitarium.

I am aware that some of the cases could be possibly challenged from the fact that the presence of bacilli could not be proved and because the tuberculin test had not been tried. In answer I can only say that only those cases have been taken which experience teaches us usually develop later more definite signs of disease under unfavorable conditions. I wish it were in my power to bring before you some of these patients, now apparently well, who were in the sanitarium formerly. Their presence and aspect would speak more eloquently to you than my mere statements of what can be done. I must content myself, however, by citing a single case as an example.

One woman (H. Q.), a domestic, was sent to Sharon from the Massachusetts General Hospital out-patient department in 1893, with bacilli in her sputa and having evidences of trouble in the right lung. She had previously been told by a physician in Ireland that she had consumption and could not live. After a stay of 14 months, she left the institution, a magnificent specimen of health, her cough having ceased several months before. She has remained perfectly well since (9 years), having been actively employed as a domestic in

ARRESTED TUBERCULOSIS.—*Continued.*

Physical Signs.	T. B.	Years Since Disch.	Date of Death.	Present Condition.	Present Occupation.	Remarks.
+ dul. both apices, esp. r.; bronchial r. apex front; coarse râle over r.	+	2—	. . . . .	Good, Jan. 16, 1903	. . . . .	
+ dul. all over r. with bronchi'l at top and râles except low half bk.; ? râle l. apex	+	. . .	1902, 1 year after discharge.	*Dead*.	. . . . .	Returned to old unhygienic conditions.
+ dul. r. apex; V. R. +; O râle. . . .	+	2	. . . . .	Good, Dec. 20, 1901	. . . . .	
Dul. r. apex with fine râle in ft.; V. R. +	+	2—	. . . . .	. . . . .	. . . . .	
Dul. r. apex with ? râle in bk.; V. R. + .	0	2	. . . . .	Good, Jan. 16, 1903	Housework..	
Dul. r. apex with b. v. and ? râle.; râle low r. axil.	0	1½	. . . . .	" " " "	Stenographer. . .	Had pleurisy with effusion.
Dul. r. apex with + T. F.; fine râle third l. interspace.	0	1½	. . . . .	" Feb. 20, "	Singer	
Dul. l. apex back with b. v. and V. R. +	+	1½	. . . . .	" Jan. 16, "	Teacher.. . . .	
Dul. l. apex with moist râle over upper half; ? fine râle r. apex.	+	1½	. . . . .	" " " "	. . . . .	
Dul. both apices, esp. l. and + + at l. base; râles over l. and few on r.	+	1+	. . . . .	" Oct., 1902. .	. . . . .	
Dul. r. apex and slight l.; fugitive râle r. and l. front.	0	1½	. . . . .	" Jan. 16, 1903	. . . . .	
Dul. r. apex — slight; râle r. top back. .	0	2—	. . . . .	. . . . .	. . . . .	Left because of sickness in family.
Slight dul. r. top with râle in bk.	0	1½	. . . . .	Good, Jan., 1903. .	. . . . .	Left against advice.
Dul. r. top with b. v. and ? râle in back; fine râles third l. interspace.	0	2—	. . . . .	Fair, Jan. 16, 1903	. . . . .	Tuberculin pos.
Dul. both tops with slight + resp. and voice.	0	1	. . . . .	. . . . .	. . . . .	Tuberculin pos.
Slight dul. both tops with faint râle on r.	0	1½	. . . . .	Good, Jan. 16, 1903	. . . . .	
Dul. l. esp. in lower front with râle; ? râle on r.	+	1	. . . . .	"	. . . . .	
Slight dul. both tops; fine râle on r.; ? on left.	0	1+	. . . . .	" Feb. 13, 1903	Housework. . . .	
Slight dul. l. apex and r. top in bk.; ? râle r. top; glands l. neck.	0	1+	. . . . .	" Jan. 16, 1903	. . . . .	
Less res. over r.; O rale	0	1	. . . . .	. . . . .	. . . . .	Tuberculin pos.

Boston and the suburbs, and lately wrote that she was never better in her life. I could cite several other cases which differ only in minor details, but this will serve as an example of what can be done not far from home in a changeable, harsh climate, at an altitude not far above sea-level.

In citing these cases I do not wish to be misunderstood. I have never been one of those who believe because of the success of sanatorium treatment in a large percentage of cases in a climate like that of New England, that it is, therefore, unnecessary for any one to seek another climate. I believe, as I have stated elsewhere, that in more salubrious climates better results can be obtained by this method than with us; but for the hundreds and thousands of sufferers who for various reasons can not go far from home, institutions like Sharon, Rutland and that of Dr. Millet at East Bridgewater are of inestimable value. I claim, moreover, after twelve years' observation, that it has been shown that it is not always necessary to send people far away in order to get well.

To keep the subsequent histories of sanitarium patients before use is, therefore, of ever-increasing interest, for by so doing we learn the true value of what may have been of the nature of an experiment at the outset.

What may we learn by studying these cases? Not only that more can be done near our homes by these methods than has been thought possible in former years, but that a large percentage of patients in whom the disease is arrested can remain well under ordinary conditions of life, especially if attention is paid to proper methods of hygiene. On the contrary, we learn that a return to unhealthful conditions is in the majority of cases usually, although not always, followed by relapse and a fatal result.

It is made more evident, too, which has been often said, but it can not be said too often, that in order to obtain the best results, patients should be placed under treatment during the earliest possible manifestations of trouble, notwithstanding the fact that in many cases of well-marked disease success has been attained.

In this paper I have confined myself solely to the histories of "arrested" cases, and have said nothing of the large percentage of those who have so much improved that they have become wage-earners again and a comfort to their families, even though they may not have wholly recovered their health. Neither have I touched on the educational influence which such institutions have on the community, a fact which I believe to be of as great importance as the benefit to the individuals themselves who enter for treatment. These points must be left, however, for other times and places.

As to methods of treatment and details of management at Sharon, they can not be enlarged on here. Suffice it to say they are what are employed in all well-regulated sanatoria of this nature. It may be said, however, that within the past three years the fresh-air treatment has been pushed to its utmost limit, even in the coldest weather, the results being even more satisfactory than in the earlier years of the sanitarium. Elsewhere[2] I have touched on this special point.

In conclusion, let me say that it is my belief that these methods will be found to be efficacious in all forms of tuberculosis, whether of medical or surgical nature. Surgeons are already seriously discussing the wisdom of fresh-air treatment in tubercular joint disease, and if we reason by analogy I see no reasonable ground for doubt that such cases will find it at least an adjunct as powerful for recovery as it is in pulmonary disease.

THE RED-LIGHT TREATMENT OF SMALLPOX.

NIELS R. FINSEN.
COPENHAGEN, DENMARK.

In a former issue of THE JOURNAL[1] there appeared an article by Dr. J. F. Schamberg, entitled "An Examination into the Claims of the Red-Light Treatment of Smallpox." He criticises the treatment: 1, Because I called it a new one; 2, because he considers my theoretical views concerning smallpox and light to be wrong, and 3, because he is of the opinion that the red-light method has proved inefficacious, and that the good results in all former experiments may have been due to

2. Origin and Growth of Sanatoria for Tuberculosis in Massachusetts. Jour. of Tuberculosis, vol. v, No. 2, April, 1903.

1. May 2, 1903, page 1183.

other factors; and he further suggests that the cases so treated were probably so mild in type that they would have escaped suppuration without the red-light treatment.

I. "THE RED-LIGHT TREATMENT IS NOT NEW."

I am surprised that Dr. Schamberg should consider the modern red-light treatment to be the same as the one employed in the middle ages by Gaddesden and others. The modern red-light treatment is a negative treatment, its object being to prevent the chemical rays of daylight or light from acting injuriously on the patient. Whether this be obtained by leaving the patient in entire darkness or in red light is in itself quite immaterial. I have recommended red light because it is more agreeable than complete darkness, while it is of the same value in the treatment, but I have no doubt that either dark-yellow or dark-green curtains might be used, provided only that they are so dark as to exclude the chemical rays.

In my papers on the subject I have used the expression "treatment of smallpox by exclusion of the chemical rays of daylight" more frequently than that of "red-light treatment," thus avoiding the danger of mistake as to any similitude with Gaddesden's treatment. The latter term, however, has the advantage of being shorter and more easily understood, especially by those who have some idea of photography and of the photographer's red-room. Gaddesden's treatment was a positive one, and consisted in surrounding the patient with all sorts of red things, red pictures on the walls, red balls in the patient's bed, etc. Dr. Schamberg himself quotes the following description of John of Gaddesden's way of treating the Prince of Wales, who was "treated for smallpox by being put into a bed surrounded with red hangings, covered with red blankets and a red counterpane, gargling his throat with mulberry wine and sucking the red juice of pomegranates." At that time it did not occur to them to shut out the light from the sick-room. Their explanation of this peculiar treatment was that the red articles should irritate the blood just as a bull is irritated by a red cloth, thus producing a more pronounced erythema, that is, forcing all the "bad matter" to get out."[2]

The object of the modern "red-light" treatment is just the opposite, viz., to make the exanthem less pronounced. When, in spite of all this, Dr. Schamberg states that the modern red-light treatment is not new, but the same as that of the middle ages, I do not agree with him.

II. "MY THEORIES ARE NOT CORRECT."

Considering the fact that the author of this criticism has so faulty an understanding of the method that he considers the smallpox treatment of the middle ages as identical with the modern treatment, that of excluding the chemical rays of light, I think that it would be useless to discuss theories with him.

III. "THE RED-LIGHT TREATMENT OF SMALLPOX IS INEFFICACIOUS, AND THE GOOD RESULTS, AS SHOWN BY ALL FORMER EXPERIMENTS, ARE DUE TO OTHER FACTORS."

The above verdict on the results obtained and published by a score of well-known physicians skilled in the treatment of smallpox, is pronounced by Dr. Schamberg, on the basis of an experiment made by himself with two patients. Although this number, as admitted by Dr. Schamberg himself, is small indeed, I might not have taken exception to it had not it clearly appeared that both patients were put under treatment too late, and the treatment did not fulfill the conditions I have fixed as indispensable. I therefore can not help thinking that Dr. Schamberg would have acted more wisely had he deferred the publication of his opinion until he had gone into the matter more thoroughly.

Dr. Schamberg says in his paper that his two patients were placed in the red-light room "about the third day of the eruption"; in other words, on the seventh day of the disease.[3] In my paper in the *British Medical Journal*[4] I say: "When the patients come under treatment early enough, before the fourth or fifth day of the disease, suppuration of the vesicles—even in unvaccinated persons and in cases of confluent smallpox—will be avoided, one exception out of about 70," and, further, in the same paper, "should the patient come under treatment after the fifth day of the disease, it is uncertain whether the suppuration can be avoided. Sometimes this is the case, sometimes not."

Now, as Dr. Schamberg's two patients were unvaccinated, delirious men, furnishing particularly severe cases with confluent pustules, it was particularly unfortunate that they did not come under the treatment until so late, and I am not surprised that suppuration occurred.

Of the many medical men who have tried this treatment and who have written about it, Dr. Schamberg is, so far as I know, the only one who disparages it on the ground of bad results. I have no doubt that he, too, will become a warm sympathizer in time.

THE CONDITIONS INDISPENSABLE TO SUCCESS.

In order to prevent future attacks, based on erroneous experiments with this method, I repeat that two conditions are absolutely indispensable if good results shall be obtained, viz.: 1, As stated above, the patient should be placed under treatment sufficiently early, and 2, the chemical rays of daylight should be absolutely shut out. The efficiency of the method is so certain that in case suppuration should occur in a patient who was placed under the treatment in proper time, the first thing to be thought of is that from want of care either on the part of the patient or of the nurse daylight may have penetrated. Therefore, before the method can justly be declared a failure the thoroughness with which it is carried out should be tested by exposing photographic plates or sensitized paper as a means of control in different places in the sick-room. If these photographic plates show the influence of white light the technic of the treatment has been imperfect. A few of those who have applied the method have at the same time treated the patient by other remedies as well. Such a course is objectionable for scientific purposes, as it is then impossible to decide which agency is responsible for the results. In order to give the experiments decisive scientific value they should be carried out under strict control and the patient placed under the treatment in proper time.

2. See Prof. Jul. Petersen's article in the "Hospitalstidende."

3. See f. inst. W. Th. Corlett: "A Treatise on the Acute Infectious Exanthemata," p. 37, Philadelphia, 1901.

4. Dec. 7, 1895.

Remarkable Case of Contagion of Syphilis.—A pedestrian was accidentally hit on the nose by the tip of the whip of a passing teamster. A typical chancre developed at the point of the slight excoriation and investigation revealed that the teamster had syphilitic lesions in his mouth and was in the habit of nibbling his whiplash. This occurrence was reported by Dr. Melot in a French exchange.

Clinical Report.

A CASE OF EMPYEMA OF THE FRONTAL SINUS.*

C. A. THIGPEN, M.D.
MONTGOMERY, ALA.

J. B. C., aged 38 years, consulted me for headache and vertigo.

History.—Thirteen years ago he had an attack of la grippe which was accompanied by much constitutional disturbance. During the time of his confinement he had fever and suffered much from headache, which was intolerable at times. He also stated that there was a discharge from the left nostril which has persisted since, except at times when he would "take cold" the discharge would cease, and his headache would become more intense, with much vertigo, nausea and mental stupor; these symptoms subsiding "when the cold would break" with a profuse discharge from the nose.

With this incomplete history of thirteen years' suffering I began my examination of the patient. His physical appearance was one of anemia and emaciation. The left frontal region was more prominent than the right, and the left eye was pushed down and out, and there was diplopia.

Examination of Nose.—Right nostril was clear and free from disease. Left nostril, there were several large polyps which occluded the nostril, and these were bathed in pus, which filled the entire cavity. With this condition of things I at once concluded that he had empyema of the ethmoidal, frontal and maxillary sinuses on the left side and advised operation, which he refused at that time. About two weeks later, however, he returned to me in great distress, and requested me to perform the operation. He was accordingly placed in the hospital and the usual preparations made.

Operation.—Preliminary to opening the frontal sinus I removed the polyps with the middle turbinate and curetted and broke up the anterior ethmoidal cells. The frontal sinus was then opened by making a median vertical incision, which was joined by one at right angles just above the brow. I selected the highest point possible in order that I might drill freely downward and backward into the nose. On opening the cavity a great quantity of pus escaped in spurts, with the pulsations of the heart. There were also some small polyps and granulations, and on removing these with my curette I came in contact with a yielding surface, which pulsated. The opening in the bone was enlarged, and I found myself in a large cavity, the anterior wall of which was formed by the frontal bone and the posterior wall by the dura and the brain. Around the border of this cavity there were firm adhesions between the dura and the bone. There was a firm and strong septum which separated this cavity from the opposite side. The dura was much thickened and covered with granulations. These were gently curetted away and the cavity irrigated with saline solution. No difficulty was experienced in making a large opening into the nose, through which was drawn a large piece of gauze. The cavity was loosely packed and the external opening closed, except at the lower inner angle, the head was bandaged and the patient placed in bed. The subsequent course of the case was uneventful, fever and pain disappeared, as well as the vertigo, and the mind became much clearer. After two weeks the patient was allowed to return to his home, with instructions how to look after himself. Reports from time to time were favorable, and three months later, when he returned to see me, I was surprised to find him entirely well, having gained much in weight. He was the picture of health. Careful examination failed to find any cavity which had become obliterated.

I report this case because of the unusual conditions found at the operation, the absence of the posterior wall of the sinus, pressure on frontal lobe, with mental impairment. Whether the absence of the posterior wall of the cavity was an anatomic anomaly or the result of breaking down due to prolonged suppuration, I am not able to say, but I rather incline to the latter opinion. Ingals reports one case somewhat similar in which there was an absence of the septum and posterior walls of both cavities. The same author also cites a case of Gibson's where there was an absence of the posterior wall on right side, the patient dying of septic meningitis.

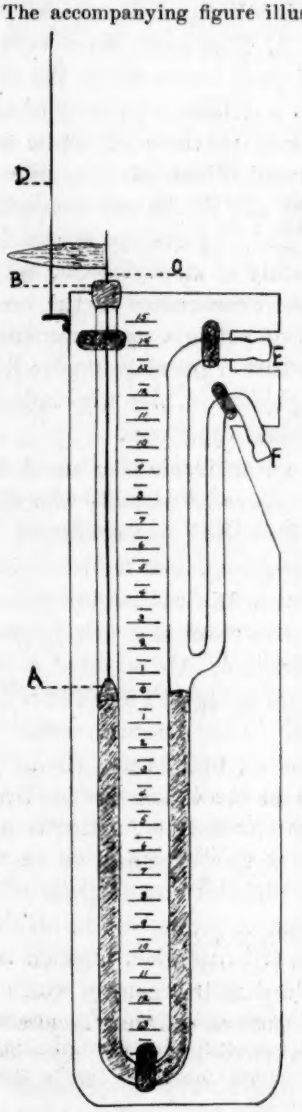
* Read at the Fifty-fourth Annual Session of the American Medical Association, in the Section on Laryngology and Otology, and approved for publication by the Executive Committee: Drs. George L. Richards, O. Joachim and G. V. Woollen.

New Instrument.

AN IMPROVED MERCURY MANOMETER.

C. C. GUTHRIE, S.B., M.D.
(From the Hull Physiological Laboratory, University of Chicago.)
CHICAGO.

The accompanying figure illustrates the main features of a mercury manometer which I have found more convenient than the ordinary type for blood-pressure work.



The float A and cap B are made of aluminum and the piston C and the guide rod D of polished or nickel-plated steel. The wood base is cut out in such a manner as to protect the ends of the tubes E and F. E is connected with a three-way canula, which is in communication with the pressure bottle and blood vessel. In filling or washing out the manometer from the pressure bottle with the solution used to prevent clotting (I employ 2 per cent. sodium citrate), F, which is fused into the manometer tube E, about 1 cm. above the level of the mercury at zero pressure, serves as an outflow tube. Of course, when a pressure tracing is being taken, the rubber tube on F is closed by a pinch-cock. The perpendicular guide rod which keeps the writing point against the drum is movable around a horizontal axis and is thus easily adjusted, and as it is attached to the manometer base, it does not interfere with other apparatus on the manometer stand.

Social Functions of the County Society.—The *Iowa Medical Journal* commends the spending of time occasionally in social functions where physicians can meet at least in a semi-leisure way, where they find that each of them is well worth cultivating—for the physician, however scientific he may be, is more than a scientist; he is a man, he is earnest, he is honest, he is broad, he is deep, he has heart interests, he has sympathies. He appreciates all those things that go to make up the best that is in the world and has to consider all those things that go to make up the worst of the world.

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SATURDAY, NOVEMBER 14, 1903.

THE ETIOLOGY OF ACUTE ARTICULAR RHEUMATISM.

It has long been held that acute articular rheumatism is an infectious disease, but no positive proof has been furnished. The basis for this belief includes the following clinical observations: 1, Rheumatic fever occurs in epidemics; 2, there is a great constancy in the seasonal variations; 3, there is a striking similarity of the symptoms of rheumatic fever to those of septic infections. Bacteriologic investigations of this disease have not been wanting, but the results are somewhat confusing. As early as 10 and 12 years ago several investigators reported the finding of staphylococci, streptococci and diplococci in the excrescences in the heart valves and in other organs of patients who succumbed to this disease. Among the earlier investigators we find four who have isolated staphylococci, five who isolated streptococci and six who found diplococci.

In 1897 Achalme found an anaërobic bacillus in the heart's blood and in other organs of patients who died from acute rheumatism. This work was confirmed by several other French investigators, but more recently discredit has been thrown on it by Achalme himself.

In 1899 these investigations received a new impetus through the work of Wassermann. He reported a case of postrheumatic chorea, from the heart's blood of which he isolated a streptococcus. This organism appeared as a diplococcus in the tissues, but formed chains on artificial media. It grows best in alkaline media. When injected into animals it produces fever, arthritis and death. Wassermann believes this organism to be the cause of rheumatism, and differentiates it from other streptococci by the facts that it grows best in alkaline media and that it produces arthritis when injected into animals. Meyer described a similar organism which he isolated from the tonsils of patients suffering from acute rheumatism. His cultures from the blood and joint punctures gave negative results, but nevertheless he concludes that his organism is the cause of rheumatism.

These views were strongly opposed by Singer and by Menzer, both of whom have isolated streptococci from cases of acute rheumatism. Singer, who seems to have done more work on this disease than any other investigator, believes that it may be caused by any of the pyogenic cocci. In over 100 cases that he examined with some 30 positive results he found the *Streptococcus pyogenes* most frequently, and occasionally the *Staphylococcus pyogenes aureus*. Both he and Menzer point out that joint changes have been produced in animals with staphylococci and with streptococci which were isolated from the throats of scarlet fever patients, when these organisms were injected into the circulation. They also call attention to the fact that some of the ordinary streptococci grow best in alkaline media, as was shown by Lingelsheim. It is also well known that streptococci may be isolated from the throats of patients not suffering from rheumatism and of healthy persons. Hence not much stress can be laid on the work of Meyer.

In 1900 Paine and Poynton reported 8 cases from which they isolated a diplococcus. This organism also produces arthritis, pericarditis, endocarditis, wasting and death when injected into animals. It grows best in acid media. These investigators believe their organism to be a cause of acute rheumatism and to be identical with that described by Wassermann. It is interesting to note here that this organism grows best in acid media, while Wassermann attempts to differentiate his organism from other streptococci by the fact that it grows best in alkaline media.

Beaton and Walker[1] have recently taken up the study of acute articular rheumatism and have described a diplococcus which grows in chains in artificial media. It grows best in strongly alkaline bouillon and produces large amounts of formic acid. It grows in the filtered cultures of streptococci and hence, according to Marmorek, is not an ordinary streptococcus. They found this organism in the heart's blood after death from chorea, acute rheumatism and endocarditis, and also in the blood and urine of patients before death. When injected into animals it produces fever, wasting, arthritis, pericarditis and endocarditis. They believe this organism to be identical with the one described by Wassermann and to be specific for acute rheumatism. They have proposed for it the name *"Micrococcus rheumaticus."* Culturally, it can not be differentiated from the pyogenic streptococci, but these investigators attempt to differentiate it on the following points: 1, It grows best in alkaline media; 2, it produces arthritis, endocarditis, etc., when injected into animals; 3, it grows in the filtered cultures; 4, it produces large amounts of formic acid. The first two points have already been dealt with, and in regard to the others the following may be said: Streptococci will grow in the filtered cultures if the filtrate does not contain too high a percentage of acid for the organism which is inoculated. All streptococci are said to produce formic acid, and when we consider that the toxin-producing power of these organisms varies within wide limits we would not be surprised to find that the acid-producing power is different under different conditions.

It seems, therefore, that we are not yet justified in speaking of a specific *Micrococcus rheumaticus*. The pyogenic cocci have been repeatedly isolated from the heart valves and blood of patients who succumbed to

1. British Med. Jour., Jan 31 and Sept. 19, 1903.

acute articular rheumatism, chorea and malignant endocarditis, and it would seem as if these organisms do maintain an intimate relationship to the processes usually spoken of as acute articular rheumatism.

BEHRING'S VIEWS ON TUBERCULOSIS.

Behring, who is a good authority on such questions and whose opinion, therefore, carries weight, accepts the view that everyone is slightly tuberculous, but this by no means implies that everyone is or will be affected with pulmonary phthisis. He thinks two things are necessary to produce phthisis: a tuberculous focus and bodily conditions favoring the development of the disorder. He regards the contagion of consumption in adults with grave doubt, holding that it has not yet been demonstrated. Therefore, the predisposition to pulmonary infection is not in exposure to infection which is shared by all more or less, but in the conditions of life. The more probable cause is the awakening of a latent focus into activity on account of defects of nutrition or from impairment of health.

Leaving out of consideration for the present his opinions as to the early infantile origin of pulmonary phthisis, his views are in a measure somewhat comforting. These views should not encourage us to neglect reasonable precautions for self-protection, but they do oppose the pessimistic views held by some modern alarmists. Behring's opinions also have this in their favor; they harmonize with the great decrease of tuberculosis under better modern conditions of living which implies that the bodily resistance, given a fair chance, will throw off the disease. As we have often said, it seems probable that in time consumption may be a comparatively negligible affair and that tuberculous infection of itself is not so much to be feared under ordinary hygienic conditions of life. It is only when reinforced by other pathologic infections that it develops into the disease so much dreaded. The possible, if not even probable, hope of an immunizing serum against tuberculosis is also to be considered. The results of Behring's experiments on the lower animals, as well as the earlier ones of Trudeau and De Schweinitz, are certainly encouraging, and give us good reason to be hopeful for the future.

While the profession is in a receptive mood for anything scientific and new in regard to tuberculosis, it is not yet prepared to swear by the words of any master, however high he may be in science or in medicine. The result of Behring's utterances, therefore, will be to increase our caution as regards the infant acquirement of tuberculosis and probably not to diminish it as regards its communicability to adults. One thing is certain, however, and that is that bodily resistance to the germ is an important thing. We must build up our defense, while not neglecting active measures to prevent the attacks from the outside. In any case it is well to remember, considering the discrepancies of views held by some authorities whose opinions we can not but respect, that extreme radical opinions in regard to either the dangers or comparative harmlessness of the tubercle germ are out of place. We have to be somewhat selective as regards our views, and it must be with judgment. Another thing is that the evidence shows that the problems of tuberculosis are not to be worked out at once. We are yet in the transition period, and there is much uncertainty before as well as behind us in regard to this particular subject. The report of the British Tuberculosis Commission will be anticipated with interest as probably giving a judicial statement of our present acquisitions, if not more positive data, especially as regards the varying views held as to the dangers of bovine tuberculosis and the liabilities of the human species to its infection.

CHRISTIAN FENGER AS A PATHOLOGIST.

In an address before the Chicago Pathological Society[1] Dr. E. R. Le Count gave an excellent and thorough review of the pathologic work of the late Christian Fenger. It was indeed a happy thought that guided the author in the preparation of this address along the lines indicated in its title; for it was the persistent, laborious study of the fundamental pathologic conditions that gave to Fenger's work as a surgeon and as a teacher of surgery its lasting influence on the development of scientific medicine in this part of the country.

This is hardly the place to review in detail Fenger's remarkable work as pathologist and surgeon. Those who knew him in his lifetime and perchance were fortunate enough to come under his personal influence will find that Dr. Le Count's address in every way gives an adequate and sympathetic presentation of his painstaking methods of work and of the scope of his investigations. To the younger generation of medical men just entering on the scene of professional activity the address is recommended for careful study in order that they may receive stimulus and inspiration from this noble example of untiring work and love of truth that after all were the chief lessons of Fenger's life, for the master-word in medicine is "work." "It is directly responsible for all advances in medicine during the past twenty-five centuries. Laying hold on it, Hippocrates made observation and science the warp and woof of our art. Galen so read its meaning that fifteen centuries stopped thinking and slept until awakened by the *De Fabrica* of Vesalius, which is the very incarnation of the master-word. With its inspiration Harvey gave an impulse to a larger circulation than he wot of, an impulse which we feel to-day. Hunter sounded all its heights and depths, and stands out in our history as one of the great exemplars of its virtues. With it Virchow smote the rock, and the waters of progress gushed out; while in the hands of Pasteur it proved a very talisman to open to

1. Trans. Chicago Path. Society, 1903, vi, 1-20.

us a new heaven in medicine and a new earth in surgery. Not only has it been the touchstone of progress, but it is the measure of success in everyday life."

So writes Osler in one of his helpful and charming addresses. And it was work that made Fenger, at first practically unaided, the leader of scientific medicine in the Northwest for twenty odd years, a period which he himself characterized as a period of uninterrupted progress. It was work that made it possible for him, coming here from a strange country, to say at the close of his career: "It is a satisfaction to me to have done my life-work here, witnessing and taking as best I could a small part in the growth of the West."

GRANTS FOR SCIENTIFIC WORK.

A further result of the small grants given by the American Medical Association to promote scientific research is embodied in the article by Otis and Evans on "The Morphology and Biology of the Parasite from a Case of Systemic Blastomycosis" in THE JOURNAL, October 31. Through an unfortunate oversight it was not stated in connection with the title of the article that the work had been promoted by an Association grant. We have referred in the issue of July 4, 1903, to the significance of the case of accidental infection with oidiomycosis from which was recovered the same organism as that described in the exhaustive study of Otis and Evans. It may be recalled that this case, being one of accidental infection from a known source, is to be regarded as an important landmark in the series of observations that have established blastomycosis or oidiomycosis on a firm basis. It was, therefore, doubly desirable that a thorough study of the organism concerned should be made. So far, the small grants offered by the Association have been the means of promoting interesting researches into the nature of streptocolysin[1] and in the field of mold-fungus infections of man. We believe that not the least important result of these grants is the encouragement thus given to young men to develop the spirit of investigation.

OUR PHILIPPINE QUARANTINE SERVICE.

Since we have acquired eastern possessions, with certain responsibilities and risks, it is satisfactory to know that our agents in the Orient are attending to sanitary matters. Plague and cholera have existed in the Philippine Islands for the past year and the latter especially has been a scourge in a large portion of the group. Notwithstanding the fact that we are in almost weekly communication with the islands and that travel back and forth by army transports and otherwise has become very extensive, we do not dread the introduction of cholera into this country because of our confidence that the quarantine authorities in the Philippines are wide-awake. The annual report of the chief quarantine officer for the Philippine Islands for the year ending July 31, 1903, contains some interesting particulars. With the possible exception of the work done at Tor, Egypt, near the southern entrance of the Suez canal, there is probably more disinfection accomplished at Mariveles station, near Manila, than at any other similar one in the world and this, moreover, with labor that speaks a foreign tongue and which has to be educated in every particular. This outlying fortress for public health is certainly doing very creditable work. There have been, it is estimated, about 300,000 cases of cholera in the Philippine Islands during the year covered by the report, and the extent of the disease is attributed largely to the possibilities of easy communication by small native crafts and boats which are hard to oversee throughout so extended a region and under such unfavorable circumstances as exist. A history of some of the epidemics that have entered the island prior to American occupation gives rise to the belief that some of them have entered from the south; therefore, an additional quarantine station has been established at Jolo, in the southern end of the archipelago, which is an important point in the commerce with adjoining Malaysian islands. It is a notable fact that plague has not extended during the year away from the City of Manila; it may be said to be firmly bridled and controlled. There seems to be a cordial co-operation between the public health service and the local boards of health in this matter. Taken altogether, and considering the possibilities of an inefficient or negligent administration of health matters there, we have many reasons to congratulate ourselves. Our commerce with our Oriental possessions is constantly growing, and with more intimate relations the greater will be the need of eternal vigilance as a safeguard for our own communities.

THE IMPORTANCE OF HEMATOLOGIC INVESTIGATIONS.

The number of those who decry the importance of blood examinations as a diagnostic measure is progressively diminishing, while the number of physicians who include a hematologic investigation among their clinical assets is as progressively increasing. It is not only the enumeration of the erythrocytes and the leukocytes and the estimation of the hemoglobin percentage that are of importance, but also a knowledge of the morphologic characteristics of the dried and stained films is frequently necessary for a satisfactory diagnosis. In some instances, although the blood may show no absolute leukocytosis, stained specimens show a relative leukocytosis of the first importance. In the case recently reported by Kelly[1] of a man who complained of weakness and who presented, on physical examination, slight jaundice, great enlargement of the spleen, moderate enlargement of the liver and leukoderma, a blood examination showed only 9,000 leukocytes. A differential count, however, showed that 98 per cent. of the white cells belonged to the lymphocyte class. Under observation, the leukocytes at different times numbered 6,000, 5,200, 18,200 and 37,600, and always with an increase of lymphocytes (96.5 and 98 per cent.). The patient died in coma. At the necropsy marked enlargement of the lymph nodes, except those of the axillary and the inguinal regions; enlargement of the spleen; gumma and syphilitic cirrhosis of the liver, and lymphadenoid bone marrow were demonstrated. There seems to be a ten-

1. THE JOURNAL, Oct. 17, 1903.

1. Univ. Pa. Med. Bull., October, 1903. See abst., p. 1230

dency, among certain observers, to depart from the original division of leukemia into two classes—lymphatic and myelogenous, as made by Ehrlich. To one reading the chapter on leukemia, in the eighth volume of Nothnagel's *Specielle Pathologie und Therapie*, by Ehrlich and Lazarus, the position of these writers is remarkably clear and their logic appears sound. It is possible that in cases such as the one detailed by Kelly an intercurrent syphilitic infection produced the anomalous conditions found in the blood-making organs. Cases of lymphadenoid degeneration of the bone marrow are perplexing; but there is no reason why this should not be a secondary manifestation as well as that secondary deposits of lymphoid tissue should be found in an organ like the liver. Neither does it seem absolutely essential that the lymph nodes shall be enlarged in order that the lymphocytes shall be swept in abnormal proportions into the blood stream.

Medical News.

ARKANSAS.

Hot Springs Visitors' Protective Association.—At the meeting, October 27, the association endorsed the work done by th executive committee and unanimously chose the same committee to carry on the fight. The committee consists of Drs. Algernon S. Garnett, Thomas E. Holland,, Gaston A. Hebert, Paul T. Vaughan and Howard P. Collings. Dr. Oliver H. Barton was elected president and Dr. Frank W. Jelks secretary of the association.

The Grand Jury Indictment.—Drs. C. Travis Drennen and Thomas E. Holland, Hot Springs, were recently indicted by the grand jury for "drumming." That the act of the grand jury does not meet the approval of the profession is apparent from the following resolution passed by the Visitors' Protective Association:

WHEREAS, It has been brought to the knowledge of the Visitors' Protective Association that the grand jury has found true bills against Drs. C. T. Drennen and T. E. Holland, charging them with soliciting or drumming for patronage or patients; and

WHEREAS, We believe that such result was achieved through the unreliable evidence of one unworthy of credence, an enemy to good government, a violator of the law against drumming, and a personal enemy of the aforesaid physicians and the cause they have in the past espoused and are now so vigorously and ably prosecuting; and

WHEREAS, We believe that the effort of said party to procure said indictment, aided and abetted by others, who are alike strangers to the truth, opposed to good government and the enforcement of the law against doctor drumming, was made because of personal ill will to said physicians and to discredit the organized body of ethical physicians who are making a crusade against the methods of procuring patients by unethical and unprofessional doctors in the city of Hot Springs; now, therefore, be it

Resolved, That it is the unanimous belief of the association that the charges against Drs Holland and Drennen are false and wholly without foundation; that we hereby express our full confidence in their fidelity to the cause they have espoused; in them personally, as men eminent in our profession, and possessing to the fullest degree that sense of professional ethics which characterizes every reputable physician and gentleman; be it further

Resolved, That, in order to show our full confidence in and esteem for said physicians and to emphasize the assertion that we believe said indictments were "conceived in sin and born in iniquity," we hereby request our attorney, Reid Gantt, Esq., to represent said physicians in their defense if they should need any attorney.

ILLINOIS.

Scarlet **Fever.**—The school at Sharpsburg has been closed on account of scarlet fever.——Springfield has 30 cases and an epidemic is feared.

Accused Guards Out on Bail.—The two guards at the Illinois Hospital for the Incurable Insane, Bartonville, accused of having caused the death of Thomas Hartley, a patient, have been released on bonds of $10,000 each.

Smallpox.—The disease is said to be raging at New Athens, where churches and schools are reported to be closed.——Bloomington is reported to have 25 cases, and Charleston many cases, while in Westfield quarantine and vaccination has reduced the number of cases to 11.

Chicago.

Council Passes Toy-Pistol Ordinance.—On November 9 the city council passed the ordinance prohibiting the sale, loan or furnishing of toy pistols, guns, etc., to minors, and fixing a $100 fine for each offense.

Death-Causes of the Week.—Pneumonia leads with 67; then follow Bright's disease with 41, heart diseases with 40, consumption and violence with 37, and acute intestinal diseases with 31. The total deaths were 476, equivalent to an annual rate of 13.16 per 1,000.

Demands Muzzling of Dogs.—The Chicago Medical Society, October 28, indorsed the ordinance now before the council requiring the muzzling of dogs during the entire year. A committee will be appointed to attend the council and urge the passage of the ordinance.

Personal.—Dr. Frank Billings had so far recovered as to be able to be removed from the hospital to his residence November 11.——Dr. Sarah Hackett Stevenson is still in St. Joseph's Hospital, and her condition has changed little either for better or worse.——Dr. and Mrs. C. M. Briggs celebrated their golden wedding October 25.——Dr. and Mrs. J. Lewis Stettauer have returned after two years' residence in Europe.

The Prevention of Pneumonia.—The weekly Bulletin of the Health Department announces for the week ended November 7, 67 deaths from pneumonia, 14 per cent. of the total deaths, and 81 per cent. in excess of the deaths from consumption. The report says:

It is clearly the duty of the sanitarian and the worker in the field of preventive medicine to do what in him lies toward education in the precepts of healthful living. A simpler housing, with abundant facilities for the access of sunshine and fresh air, and space enough for each individual; a simpler raiment, which shall preserve the natural power of the skin to resist the effects of draughts and chills and "colds"; a simpler dietary, which shall not overtax the digestive system, and less cookery so that the teeth may have sufficient exercise to prevent their premature decay; more exercise in the open air and, in general, a resort to the simpler and more natural modes of life to which each and every one of us was born, and out of which each and every one of us is removed as promptly as civilization can act.

Pure Milk Saves Babies.—Over 190,000 bottles of sterilized milk were distributed as the first season's work of the milk commission of the Children's Hospital Society. From 31 substations supplies have been distributed daily to thousands of poor people all over Chicago. At the social settlements, dispensaries and hospitals the following poster has been displayed:

Fifty per cent. of children die when less than 5 years old, principally because of improper feeding. Pure pasteurized milk for babies of all ages and conditions sold at cost.

Health Commissioner Reynolds' opinion of the value of the work is indicated by the following letter addressed to Mrs. George M. Moulton, chairman of the distributing committee:

I am greatly pleased at the opportunity afforded me—by your request for the mortality figures of children under 5 years of age during the summer of 1903—to express my appreciation of the commission's work.

During the season there were 2,385 deaths of this age, or 12.6 per 10,000 of the total population. In the summer of 1902 the proportion of such deaths was 13.3, and in that of 1901 was 14.3 per 10,000.

The reduction this year is especially significant in view of what was expected as a result of the single daily delivery of milk. Children's physicians and sanitarians were apprehensive of a murderous increase of child mortality through the feeding of milk from 48 to 60 hours old before it reached the young.

Fortunately this apprehension was not realized, chiefly, as I am convinced, through the 190,000 bottles of sterilized milk distributed through your commission.

The community, and especially mothers in the congested districts, owe you and your colleagues a debt of gratitude.

MARYLAND.

Typhoid at Insane Hospital.—There are five cases of typhoid fever at Springfield Hospital for the Insane at Sykesville. Dr. Clark thinks it was introduced by an attendant as the water supply is above suspicion.

Baltimore.

Lectures on History of Medicine.—The course on the history of medicine at the University of Maryland began on October 28 and will continue during the session on the second and fourth Wednesdays of the month.

Public Baths a Success.—Public bathhouse No. 3 will be begun shortly. There were 1,800 more persons using the baths in October, 1903, than in October, 1902. Mr. Henry Walters has given $93,000 for the baths.

Changes at Woman's College.—At the Woman's Medical College the following changes are announced: Dr. H. Warren Buckler has been appointed professor of practice of medicine

and therapeutics, Dr. Henry Lee Smith professor of medicine, and Dr. J. H. Mason Knox professor of diseases of children.

Antitoxin Lowers Diphtheria Mortality.—Dr. W. Royal Stokes, city bacteriologist, in a recent address, said that since the introduction of the public distribution of diphtheria antitoxin, the rate of mortality from this disease in Baltimore has fallen from 50 per cent. in 1894 to 13 per cent. at the present time.

Vital Statistics.—There were 148 deaths last week, a proportion per 1,000 of 13.95, and for the whites alone of only 12.57. Typhoid fever caused three deaths. During October 776 deaths and 731 births were reported. There was 1 death from smallpox. Typhoid fever was much less prevalent than in 1902.

Suing and Sued.—Dr. George A. Strauss has sued the United Railways and Electric Company for $10,000 damages for fracture of an arm and ribs received in the premature starting of a car.——Drs. John W. Chambers and Thomas S. Latimer have been sued for $25,000 damages by a woman who was operated on at the City Hospital.

Personal.—Dr. Charlotte Murdoch has been made superintendent of the Deaconesses' Home recently established by the Presbyterian Church in Baltimore.——Dr. Ernest C. Leonard has been made lecturer on materia medica at Maryland Medical College.——Dr. A. K. Hadel has been elected president of the Society of the War of 1812.——Dr. John T. O'Mara, resident physician of St. Agnes' Sanitarium, sailed for Vienna, November 5.

MASSACHUSETTS.

Cornerstone Laid.—The cornerstone for the new Deaconess Hospital, Longwood, Boston, was laid with appropriate ceremonies, November 5.

Poisoned by Belladonna.—On the night of October 27 eleven patients in the State Hospital at Tewksbury were in some unknown way poisoned by belladonna. There were no serious results and the accident is being investigated by the superintendent.

Music for Hospital Patients.—During November a company of musicians under the direction of Dr. John Dixwell is giving concerts at the hospitals of Cambridge and Somerville, the Massachusetts General Hospital and the Insane Hospital at Forest Hills.

Nursing Taught in Public School.—For the first time in the public schools of America nursing is one of the subjects taught. The school is the Evening High School in Charlestown, and the teacher, Dr. Laura A. C. Hughes, is president of the Boston Society of the Red Cross Association.

Tufts Medical School News.—Tufts Medical School begins the year with 412 students, an increase of 23 over last year. ——Dr. Harold Williams, dean and professor of theory and practice, has a leave of absence for 10 months. His lectures will be given by Dr. Robert W. Hastings.

Typhoid in Springfield.—Typhoid fever has been somewhat prevalent in Springfield, especially in that portion of the city known as the "McKnight District." The source was traced to an infected spring from which many children drank. The disease has hence affected more than ordinarily the children of the well-to-do families in this residence district.

For New Floating Hospital.—Earnest efforts are being made to secure funds for the construction of a new Boston Floating Hospital. The old boat is too small, and will require a large outlay to make her safe for another season. More than $12,000 has already been subscribed. The annual meeting of the hospital corporation on November 2 resulted in the reelection of the old officers.

Death and Disease.—For the four weeks ended November 7 there were 724 deaths in Boston, a decrease from last year's record of 162. There were reported to the board of health, 262 cases of diphtheria, with 20 deaths; 91 of scarlet fever, with 4 deaths; 91 of typhoid fever, with 15 deaths; 246 of measles, with 5 deaths; 137 of tuberculosis, with 71 deaths; 61 deaths were reported from pneumonia, 3 from whooping cough, 67 from heart disease, 16 from bronchitis and 21 from marasmus, and one case of smallpox, imported from Bangor, Maine. The latter is the first case of the disease to occur in the city since last spring.

MICHIGAN.

Conference of Health Officers.—The State Board of Health has decided to hold the annual conference of health officials at Ann Arbor, Jan. 7 and 8, 1904.

Board Elects Officers.—The State Board of Medical Registration has reorganized by the election of Dr. James H. Cowell, Saginaw, as president, and Dr. Beverly D. Harison, Sault Ste. Marie, as secretary.

Sentence Deferred.—In the case of Dr. William W. Phippen, Grand Rapids, who pleaded guilty to the technical charge of practicing medicine without a license, the judge deferred sentence until January to give the defendant time to present proofs that the refusal of the State Board of Registration in Medicine to issue him a license was based on a misapprehension.

Outbreaks of Communicable Diseases for the Quarter.—The secretary has presented to the State Board of Health his report of work done in the office during the quarter ending September 30, 1903. This report includes a statement of the number of outbreaks of dangerous communicable diseases, reported and acted on during the quarter, as follows: Diphtheria, 95; measles, 99; whooping cough, 100; smallpox, 104; meningitis, 116; scarlet fever, 151; typhoid fever, 266; consumption, 369; total for the eight diseases, 1,300 outbreaks. Compared with the average in corresponding quarters in the ten years, 1893-1902, the reports from regular observers indicate that in the third quarter of 1903 diphtheria, pleuritis, scarlet fever and smallpox were more than usually prevalent, and meningitis, cholera infantum, cholera morbus, consumption, dysentery, erysipelas, intermittent fever and remittent fever were less than usually prevalent.

Diseases Which Householders Are Required to Report.—The State Board of Health has prepared a circular in which it is declared that consumption, pneumonia, cerebrospinal meningitis, typhoid fever, diphtheria, whooping cough, measles, scarlet fever, smallpox, glanders, and rabies are dangerous communicable diseases, and therefore "diseases dangerous to the public health," required by law to be reported. Every case of each of these diseases must be reported to the local health officer by the householder, hotel keeper, boarding-house keeper or physician. The law is then quoted showing the duty of such persons to so report. The use to be made of such reports is not the same for all diseases, because the manner of spreading and the measures for the restriction are not the same for all diseases. Houses infected with some diseases are to be placarded, with others not. Persons having some of the diseases are to be isolated. Relative to each of those diseases, such facts are published by the State Board of Health, and a pamphlet on any one of these diseases, or on all of them, will be sent to any person interested, who requests it from the office of the board at Lansing.

MISSISSIPPI.

Personal.—Dr. L. B. Neil, Raymond, has been appointed third assistant physician of the State Insane Hospital, Jackson.

Wants Bureau of Vital Statistics.—Dr. Harris A. Gant, Jackson, president of the State Board of Health, will appeal to the legislature to establish a bureau of vital and mortuary statistics, and also a state bacteriologic laboratory.

Unlicensed Practitioners.—The State Board of Health will hereafter publish the names of unsuccessful applicants in examinations for license to practice. These have heretofore been withheld because of consideration for the feelings of the unsuccessful applicants. The board has found that some of these have entered into practice in defiance of the board and will, therefore, make public the names.

NEBRASKA.

Insane from Drugs and Liquor.—Dr. James C. Dwyer, Valentine, has been adjudged insane and ordered to be committed to the State Insane Hospital. His condition is said to be due to intoxicating liquor and drugs.

Personal.—Dr. John C. F. Bush, Wahoo, has returned from Europe.——Dr. Andrew Johnson, Beatrice, has moved to Wahoo.——Drs. J. F. B. Kalol and Nicholas F. Steiner, Omaha, sailed for Europe, October 17.——Dr. Henry L. Akin, Du Bois, has gone to Vienna.

Society Meets.—The fourth quarterly meeting of the Saunders County Medical Society was recently held at Wahoo. Drs. W. J. Pinkerton, Mead, and J. M. Willis, Colon, read papers, and Drs. Andrew Johnson, Wahoo, J. G. Smith, Weston, and Charles W. Hickey, Ithaca, were admitted to membership.

NEW JERSEY.

Hospital Benefit.—The benefit festival recently held to aid the German Hospital Society of Newark netted $2,188.84 to the hospital fund.

Physician Fined.—In the case of Dr. Robert C. Ribbans, Newark, charged with having failed to report a case of smallpox, the court gave judgment for $50, and the defendant gave notice of appeal.

Orthopedic Dispensary.—A free public orthopedic dispensary has been established in the Orange Valley section of Orange, by charitably disposed citizens. The work will be under the personal direction of Dr. Russel A. Hibbs, New York City, assisted by Dr. Henry A. Pulsford, South Orange.

Threatens Suit.—An Italian lawyer of Newark, whose name was by mistake included in a list of illegal advertisers of medicines, and who was, consequently, reported by the State Board of Medical Examiners as practicing without a license, has declared that a libel suit against the board will be necessary to set him right with his countrymen.

NEW YORK.

Prosecuted by Medical Society.—On the complaint of the Saratoga County Medical Society, Jeremiah Richards of Waterford was arrested, October 21, charged with practicing medicine without a license. He waived examination.

To Investigate Summer Resorts.—Dr. Daniel Lewis, state commissioner of health, will ask the legislature for an appropriation of $10,000 to establish a new bureau in the department, to be known as the Bureau of Water Inspection and Drainage, with especial reference to summer resorts.

The D. W. Harrington Lectureship.—The medical faculty of the University of Buffalo has chosen Dr. Samuel J. Meltzer, New York, to deliver these lectures for 1903. The subject selected by Dr. Meltzer is "Edema, a Consideration of the Physiological and Pathological Factors Concerned in Its Formation." The lectures will be delivered in the medical college, November 30, and December 1, 2 and 3, at 5 p. m. Members of the medical profession are cordially invited to attend.

New York City.

Wanted for Medical Building.—In the "want list" of $3,250,000 in the annual report of the chancellor of the New York University, an item of $750,000 appears for medical college buildings.

Gypsy Illegal Practitioner.—Lottie Karl, a fortune teller and clairvoyant, was convicted, November 7, of practicing medicine without a license, and was sentenced to pay a find of $150 or to be imprisoned 60 days in the city prison. The complaint was made at the instance of the New York County Medical Association.

Endorses Health Commissioner.—A testimonial signed by 35 representative physicians of New York City has been sent to the daily press, expressing the great appreciation of the physicians of the city of the work accomplished by Health Commissioner Ernst J. Lederle and his advisory board in the last two years, and offering their public acknowledgments.

Control of Tuberculosis.—Dr. Hermann M. Biggs delivered a lecture at Columbia University, November 6, on "The Administrative Control of Tuberculosis." He declared that 60 per cent. of the deaths in New York were caused by tuberculosis, and that the mortality from this cause was especially great among tenement children at the age of four or five years.

Pavilion for St. Luke's Hospital.—Mrs. Margaret J. Plant has offered to build for the hospital a new pavilion in which private patients may have modern and even luxurious accommodations and service. It is purposed to provide accommodations for more than one hundred patients, so that, if desired, a patient may have a suite of rooms and may be attended by relatives or friends.

PENNSYLVANIA.

Verdict for Physician.—In the suit of Albert E. Foltz, Edison, for damages for alleged malpractice, against Dr. Allison A. Stamm of Mohnsville, the jury brought in a verdict for the defendant.

Smallpox.—Sharon has about 30 cases.——On November 2 four deaths occurred in Pittsburg, and four new cases were discovered.——Allegheny on the same day had 37 cases under treatment, 21 in the isolation hospital and 16 under quarantine.

Hospitals Completed.—The northern wing of the new Lancaster General Hospital has been completed, and is ready for occupancy.——Uniontown Hospital, erected at a cost of $75,000, has been completed, accepted by the directors, and will soon be ready to receive patients.——Susquehanna City Hospital was formally opened October 10.

Land and Money to Hospitals.—By a decree of the Orphans' Court, the legacy of $20,000 bequeathed by the late C. L. Magee, Pittsburg, to the late George M. von Bonnhorst, reverts to the Elizabeth Steel Magee Hospital fund.——Misses Alice and Mary Mossop have presented to Clearfield Hospital four acres of land and $20,000 in cash, for the building of a model hospital as a memorial to Fred G. Mossop, a deceased brother, who was a director of Clearfield Hospital.

Personal.—Dr. John C. Calhoun, Allegheny, in charge of the isolation hospital, has resigned, and Dr. William H. Gardner has been appointed in his stead.——Dr. Daniel W. Jeffries, Chester, has been appointed state censor by the Delaware County Medical Society.——Dr. Horace F. Taylor, Chester, was seriously cut and burned by a bottle of carbolic acid breaking in his hands.——Dr. Frank C. Knowles, Philadelphia, is taking a three months' tour of Europe and Asia.

Chester Hospital Staff Organized.—At the annual meeting of the staff, October 20, Dr. J. L. Forwood was re-elected chief of the surgical staff and Dr. D. M. McMasters chief of the medical staff. Dr. F. Farwell Long was assigned as lecturer on special surgery; Dr. Ellen E. Brown, on obstetrics; Dr. J. L. Forwood, on general surgery; Dr. Katherine W. Ulrich, on diseases of children; Dr. F. Otis Bryant, on anatomy; Dr. Samuel R. Crothers, on emergencies; Dr. D. M. McMasters, on general medicine; Dr. Edward W. Bing, on materia medica; Dr. L. Haines Crothers, on hygiene, and Dr. Leon Gottschalk, on physiology.

Philadelphia.

Reception for Weir Mitchell.—The Medical Club of Philadelphia will tender a reception to Dr. S. Weir Mitchell at the Hotel Bellevue, November 20.

Dr. Filbert's Will.—By the will of the late Dr. Ludwig S. Filbert, the estate, which is appraised at $300,000 or more, after the payment of a few small legacies, is divided equally between his wife, son and daughter.

Finsen Light Laboratory.—A specially constructed laboratory for x-ray and Finsen light research is being erected in connection with the University Hospital. At the last session of the legislature $25,000 was appropriated for this purpose. Dr. Henry K. Pancoast will be in charge of the new department.

Personal.—Dr. James E. McCoy has been appointed physician to the medical dispensary of the Children's Hospital.—Dr. B. Franklin Stahl has been appointed medical director of St. Agnes' Hospital, vice Dr. William H. Parish, deceased.——Dr. Leo Loeb has been appointed assistant demonstrator in pathology at the University of Pennsylvania.——Dr. Howard S. Anders has been made assistant professor of physical diagnosis in the Medico-Chirurgical College.

Smallpox Regulations.—The board of health recently passed a resolution directing all inmates of houses where smallpox develops to be removed to the Municipal Hospital for antiseptic baths and disinfection of clothing. The resolution provides for such disinfection in case of scarlet fever and diphtheria when the medical inspector deems it necessary. The action is especially to protect Director Martin from legal complications in carrying out such measures, as he has been several times threatened with suit for damages.

GENERAL.

The Army Medical School began its seventh annual session, November 3, with twenty-seven student officers in attendance. The faculty consists of the following officers: Col. Chas. Heizmann, president of faculty and professor of military medicine; Major William H. Arthur, professor of duties of medical officers in peace and war; Major William C. Borden, professor of military surgery; Major Walter D. McCaw, professor of military hygiene and lecturer on tropical diseases; Major James D. Glennan, ophthalmology and optometry; Captain F. P. Reynolds, instructor in hospital corps drill and medical department administration; Captain C. R. Darnall, secretary of faculty, instructor in sanitary chemistry and operative surgery; Lieutenant James Carroll, professor of bacteriology and clinical microscopy, and Captain H. G. Trout, instructor in equitation.

The Yellow Fever Scourge.—Thousands of cases of yellow fever in Mexico and hundreds in Texas are reported by the representative of the U. S. Public Health and Marine-Hospital Service. The death rate is about 5 per cent. A total of 748 cases and 74 deaths is reported at Laredo, Tex., up to November 9. Railroad schedules are interrupted and trains avoid infected towns or run through rapidly with car doors and

windows closed or else suspend passenger trains. Thus there is also scarcity of provisions in some places. The Little Rock (Ark.) Board of Health established a quarantine against San Antonio, Laredo and other infected points. Forepaugh's circus was also enjoined from stopping in Little Rock en route north from Texas. Other cities have quarantined against Texas cities. El Paso, however, has thrown wide open her gates and will receive yellow fever refugees or sufferers without restriction. This action was taken on the ground that the mosquito concerned in the propagation of yellow fever can not exist above 1,200 feet, especially in a dry climate. El Paso's elevation is 4,000 feet, and her air dry. It was, therefore, decided by the authorities of that city that no danger of the transmission of the disease exists there.

CANADA.

Smallpox in New Brunswick.—Fourteen cases of smallpox are reported in Madawasha County, N. B., on the border of the State of Maine.

Typhoid Fever in Manitoba.—This disease has been very prevalent this autumn in Manitoba and Winnipeg. In Winnipeg one of the Industrial Exhibition buildings has been converted into a hospital for 35 patients, with a house surgeon and a staff of nurses in charge.

Toronto's Health Statistics.—During October, 1903, there were 118 cases of diphtheria, 23 of scarlet fever and 18 of typhoid fever. The deaths from contagious diseases in Toronto during September and October were: Scarlet fever, one in each month; diphtheria, in September, 7; in October, 13; typhoid, 3 and 6; consumption, 28 and 19.

Druggists and Physicians Charged with Violations of Laws.—The Pharmaceutical Association of Quebec has laid charges in the police court against a number of Quebec physicians, accusing them of giving prescriptions to be filled by unlicensed druggists or unregistered drug clerks and also against several druggists for selling poisons to the public contrary to the provisions of the pharmacy act, and for permitting unqualified clerks to fill prescriptions.

Ontario Birth Rate.—The provincial board reports 47,796 births during 1902 in Ontario, as compared with 46,061 in 1901, or an increase of 1,735. The number of marriages in 1902 was 18,072, an increase of 37 over 1901. Deaths during 1902 numbered 27,864; in 1901 29,608, showing the substantial decrease of 1,744. Dr. Bryce, secretary of the provincial board, attributes the increased birth rate to the crusade instituted by the press of the country and by the ministers of all denominations against race suicide.

Manitoba Medical College Opens.—This college began its twenty-first consecutive session September 21 with the largest attendance in its history. There are over forty in the freshman class. The most particular feature of the Manitoba medical act is that there is no council examination for the graduates of the Manitoba University. All graduates of this university are licensed to practice on payment of the registration fee of $75. The following changes in the staff have been made since last session: Dr. J. O. Todd has been elected to the chair of anatomy in succession to the late Dr. Neilson. Dr. James McKenty and Dr. James Pullar have been appointed assistant demonstrators in anatomy. Dr. W. L. Watt will conduct the practical and physiologic chemistry, and Mr. J. S. Pierce will teach the organic and inorganic chemistry.

Five-Year Medical Course in Quebec.—The Quebec Board of Physicians and Surgeons at a recent meeting decided to lengthen the medical course from four to five years. Another important item was the repealing of that section of the by-laws of the Quebec council which permitted men having British licenses to register and practice in the province of Quebec without having to undergo any further examination. A third question debated was the compulsory B. A. course, or "cours classique complet," before admission to the study of medicine n that province. The law in relation to this was so amended that the Catholic or French speaking candidate would have to pass such examination, but no change was made for the Protestant or English speaking candidate. These changes will be reported to the Quebec legislature, and the probability is that they will become law without alteration.

FOREIGN.

Plague at Rio de Janeiro is reported to the extent of 29 deaths and 52 new cases and 109 cases under treatment during the week ended November 5.

King Edward Sanatorium.—The cornerstone of the King Edward VII Consumption Sanatorium was laid November 3 at Midhurst, Sussex, Eng., by the king. One million dollars was given for this by Sir Ernest Cassel.

Another Case of Lethargic Sleep.—A young man in the province of Warsaw sank into a lethargic slumber last April and it has been impossible to arouse him. He wakens sufficiently to take a little liquid food every three weeks, and then succumbs at once to sleep.

International Congress of Applied Chemistry.—The committee in charge of the sixth congress, to be held at Rome in 1906, is already diligently at work. Professor Paterno was appointed president and the executive committee consists of Professors Piretti, Nasini, Ciamician and Menozzi.

Plan for Serum Institute in Germany.—The German authorities have about decided to found a serum institute for the nearly gratuitous distribution of antitoxins and serums for various diseases, and for research thereon. It is to be modeled on the lines of the Paris Pasteur Institute and will be called the Behring Institute.

Continental Anglo-American Medical Society.—The object of this association is purely social. The members are located mostly in the various European watering-places or in the large cities, and gather once a year for social intercourse. The fifteenth annual dinner was held at Paris, October 9, with thirty members in attendance.

Driven to Suicide by a Charlatan's Publications.—A comparatively young man committed suicide last month in Vienna. He left a farewell letter to his wife and children in which he stated that he had been driven to suicide by the knowledge that the affection from which he was a sufferer entailed insanity in time, adding "See Bilz's book."

The Operation on Emperor William.—The Emperor of Germany had removed from his larynx, November 7, a small pea-sized growth, which, according to the newspaper reports, was probably a simple papilloma. The operation was very simple and brief, and the growth is declared by the physicians in charge to have no suggestion of malignancy.

Italian Congress of Pathology.—This congress was held at Florence in October and appointed Milan as the place for the next meeting, which will be held during the spring of 1905. Professors Golgi and Foa were appointed a committee to confer with the German Pathologic Society in regard to whether the approaching congress could not be made international.

Subsidies for Authors.—The well-known "Military Medical Academy" at St. Petersburg appropriates annually nearly $800 as a fund for professors in the academy who during the year have published text-books on their special branches of science. This year it was divided between Bechtereff and Kravkoff, as each had published a manual, the former on the functions of the brain, and the latter on pharmacology.

Medical Affairs in Constantinople.—A new medical school has been constructed at Constantinople, said to be a model. Prof. R. Rieder of Bonn has been in charge of the work, and the new building was to have been dedicated November 6. The sultan became convinced that the radical political element might find a footing in the new school, and he has consequently ordered the project to be abandoned. Professor Rieder returns to Bonn and the building stands vacant.

Antituberculosis Dispensary in Berlin.—Von Leyden announces that a dispensary is soon to be opened at Berlin, modeled on those in France and Belgium, for tuberculous outpatients alone. At first it is to be restricted to persons dismissed from the great Belzig sanatorium. They are to be kept track of and their environment made as favorable as possible, with supervision as to whether they continue to conform to the prophylactic measures recommended.

Heavy Fine for Failure to Find Symptoms.—A Spanish physician recently testified that he could detect nothing abnormal in a man who had apparently recovered complete health after a blow on the head. The injury had at first produced symptoms of slight concussion of the brain, but these had all subsided at the time of the medical examination. A few days later other physicians noticed the presence of symptoms of cerebral concussion and the first expert was fined by the court $300 for false testimony. The *Siglo Médico* publishes a vigorous protest against this decision "which opens a new horizon of misfortune for the already sufficiently unfortunate medical class."

Progress in Peru.—Two members of the profession have been successively minister of the interior in Peru during the last year, Drs. D. Matto and M. C. Barrios. The former organized three maritime disinfecting stations at Paita, Callao and

Ilo. Dr. Barrios assumed office last September, and within a week he had secured the passage of a law by the senate, organizing a national board of public health as a section of his department. Its duties are to be similar to those of our marine-hospital service, with a director and a subdirector for the subsections of hygiene and demography. Peru, with nearly 1,000,000 square miles, has only 4,000,000 inhabitants, and the population has been declining or stationary for several years.

Campaign Against Charlatans and Proprietary Medicines in Germany.—The Cologne courts recently fined a "magnetopath" named Offermann $250 for his pretensions that he was able to cure all diseases. The same court (Landgericht) has also recently sent out a notice warning the public against "Warner's Safe Cure," which is being advertised extensively throughout the country. The notice enumerates the ingredients of the remedy and reiterates that there is no such thing as a universal medicine to cure all diseases, and that the price of the remedy in question far exceeds the actual value of the ingredients. The public is therefore warned against purchasing this useless preparation (nutzloses Mittel). The local board of health at Carlsruhe has issued a similar notice in regard to "Flucol," a much advertised oil remedy for pains of all kinds, asthma, rheumatism, etc., warning against its internal use on account of the danger of injury to the kidneys from its ingredients.

Professional Secrecy.—The national board of health at Buenos Ayres was recently consulted by the courts in regard to a suit brought by a physician against an estate for services rendered. The physician, in bringing the suit, enumerated the particulars of his services and demanded remuneration for conducting a premature delivery, curetting and after-care. The patient was an unmarried woman, and the affair had been conducted at her request with complete secrecy. The board of health materially reduced the amount to be paid, and severely censured the physician for his lack of professional secrecy in the matter. The death of the patient in the interim was no excuse for proclaiming the details of the services rendered. They also censured him for conducting such an operation without insisting on the presence of another medical man. The action of the board was modeled on Brouardel's maxims, which it cites from his work, "La Responsabilité Médicale." Several pages are devoted to the case in the *Semana Médica* of September 17.

Recent Important Medical Congresses in Europe.—In Germany the Congress of Physicians and Naturalists was held at Cassel, September 20 to 26. This is the annual meeting of the association devoted to research and practice in the medical and allied sciences. The attendance is always well into the thousands. The principal feature this year was Behring's address on tuberculosis, which was reviewed on page 994. In France the congresses of surgery and urology have just concluded their sessions at Paris. The subjects discussed at the former were "Exclusion of the Intestine," with addresses by H. Hartmann of Paris and others, and "Brain Tumors." The subjects appointed for discussion at the Congress of Surgery next year are "Hematology from the Surgical Standpoint," with an address by Tuffier of Paris, and "Surgical Treatment of Biliary Cirrhosis," with address by Monprofit of Angers. The Congress of Urology discussed "Rebellious Cystitis" and "Surgery of the Genito-urinary Organs," with addresses by Imbert of Montpellier, Pasteau of Paris, and others, Professor Guyon in the chair. Among the communications presented on surgery of the genital organs and urethra was one by Dr. Cumston of Boston. Our French and German exchanges give full particulars of these congresses in their last and current issues.

Correspondence.

A National Research Laboratory.

MILTON, KY., Oct. 28, 1903.

To the Editor:—Your endorsement of the Smallpox Research Laboratory in Cleveland (THE JOURNAL, Oct. 24, 1903, p. 1029) is commendable and justified. Would it not be better to have a national laboratory, under the auspices of a department of health, for studies on the etiology and pathology of all contagious and infectious diseases? Does not this work in Cleveland and Boston emphasize the need of the strong arm of the government to prosecute this important work?

S. E. HAMPTON, M.D.

[Researches are now being carried on in the Hygienic Laboratory of the Public Health and Marine-Hospital Service on the etiology and pathology of smallpox and of other diseases. A building, thoroughly equipped, has recently been completed, and is now being used for the purpose. The Army Medical Department is also doing good work of this kind in connection with the Army Medical School. The lamented Walter Reed, at the time of his death, was engaged in some interesting work on smallpox. The laboratory connected with the Medical Department of the Army in Manila is doing good work in the investigation of tropical diseases.—ED.]

Dosage of Carbolic Acid.

NEW ORLEANS, LA., Nov. 2, 1903.

To the Editor:—In an editorial in THE JOURNAL, October 31, you express surprise at the possibility of administering carbolic acid in more than 7-drop doses without grave results. I, too, had been taught to regard the internal administration of carbolic acid as a dangerous procedure until I became a surgeon in the British African service in 1893, where I learned that 15-drop doses often repeated afforded the best cure for the diarrhea and dysentery so prevalent and fatal along the west coast of Africa. W. LAURENCE STEVENSON, M.D.

Queries and Minor Notes.

ANONYMOUS COMMUNICATIONS will not be noticed. Queries for this column must be accompanied by the writer's name and address, but the request of the writer not to publish his name will be faithfully observed.

MEDICAL PRACTICE IN SWITZERLAND.

GUALALA, CAL., Oct. 29, 1903.

To the Editor:—Will you kindly inform me, under Queries and Minor Notes in THE JOURNAL: 1. If foreigners can take up medical practice in Switzerland? 2. The names of the medical journals in Switzerland and where they are published? ENQUIRER.

ANS.—1. Foreigners must pass through some of the government examinations—the first, third and fourth—which are conducted in German and French and which are likely, we believe, to be rather thorough. One will probably also have to show a longer period of study of medicine than is demanded in this country. 2. At least three medical journals are published in Switzerland, possibly more: The *Correspondenzblatt für die Schweizerische Aerzte*, the *Revue Medicale de la Suisse Romande* and the *Bull. Internationale de la Soc. de la Croix Rouge*. The first is published in Basle, the other two in Geneva.

SADISM.

DETROIT, Nov. 4, 1903.

To the Editor:—In THE JOURNAL, October 31, p. 1098, under "A Warning to Wealthy Parents," there occurs the phrase "proved to be a typical case of extreme sadism." The last word is a new one to me; neither the Standard nor Century dictionaries have it. Can you give its true meaning and derivation? There may be others who do not like to pass over words that are new to their vocabulary.

G. C.

ANS.—The word means a sexual perversion which obtains satisfaction in inflicting cruelty on others. It is derived from the Marquis de Sade, a historical example of this type, and himself an author of works on sexual matters published in the latter part of the eighteenth century.

Marriages.

CHARLES H. AYLING, M.D., Gridley, Ill., October 28.

OLIVER P. COE, M.D., to Miss Kathryn Hunter, both of Cincinnati, November 11.

CLARK A. BUSWELL, M.D., Chicago, to Miss Emma Rink of Elgin, Ill., November 4.

EMORY M. GOODWIN, M.D., to Miss Edith Shumway, both of Glenville, Ohio, October 27.

BENJAMIN D. MOSHER, M.D., to Miss Minnie Hess, both of Troy Grove, Ill., October 23.

ELMA L. JANES, M.D., Madison, Wis., to George H. Townsend of Dayton, Ohio, October 29.

LOUIS V. SAPH, M.D., San Jose, Cal., to Miss Nancy Wallace of Woodland, Cal., October 21.

JAMES V. MAY, M.D., to Miss Viola Florence Pickett, both of Wautoma, Wis., October 29.

ENOCH SAMUEL COOPER, M.D., Peachtree, Ala., to Miss Louise Rosine Krudop of Mobile, October 28.

J. ROYSTON GREEN, M.D., Baltimore, to Miss Mary Chew Grason, at Towson, Md., October 28.

ROBERT JAMES CHRISTIE, JR., M.D., to Miss Edith Eliza Turner, both of Quincy, Ill., October 26.

RICHARD LAWRENCE CAMPBELL, M.D., East St. Louis, Ill., to Miss Leva A. Crane of Pekin, Ill., October 29.

T. JACOB SMITH, M.D., Princess Anne, Md., to Miss Sophonisba P. Handy, at Schoharie, N. Y., October 27.

ORVILLE WARD WILSON, M.D., Clearfield, Pa., to Miss Lottie Idella McCloskey, of Lock Haven, Pa., October 29.

ANDREW A. BRADFORD, M.D., Cambridge, Ohio, to Miss Alice E. Elder of Bremen, Ohio, at Columbus, October 22.

JESSE W. INGRAM, M.D., Whatcom, Wash., to Miss Anna Grace Newmyer of Spokane, Wash., at Walla Walla, Wash., October 23.

Deaths.

Julian J. Chisolm, M.D. Medical College of the State of South Carolina, Charleston, 1850, died at Petersburg, Va., November 2, aged 73. After studying abroad he began practice in Charleston, and by his early recognized ability rose to the professorship of surgery in 1858. In the Civil War he obtained the first medical appointment and also treated the first wounded in the war (at Fort Sumter). He was the author of a "Manual of Military Surgery," which was the official text-book of the Confederate surgeons. He resumed his chair in 1865, but removed to Baltimore in 1869, and was at once made professor of operative surgery and diseases of the eye and ear in the School of Medicine of the University of Maryland. He was also dean of the faculty from 1869 to 1874. In 1873 he gave up surgery and devoted himself thenceforth exclusively to his specialty, in which he achieved an international reputation. He was a most prolific writer, a skillful operator and a man of extraordinary energy. He was a born teacher. He was chairman of the ophthalmologic section of the International Medical Congress of 1887. The great work of his life was the founding in 1877 of the Presbyterian Eye, Ear and Throat Hospital of Baltimore, one of the largest special hospitals in the country. In 1894, shortly after a trip to Europe, he was stricken with apoplexy and aphasia, and his active work ceased. He then gradually failed until his death.

William Reed McMahan, M.D. Rush Medical College, Chicago, 1868, one of the most prominent practitioners of southern Indiana; a veteran of the Civil War; in 1882, 1883 and 1884 professor of pathology in the Evansville (Ind.) Medical College; for 18 years chief surgeon of the Louisville, Evansville and St. Louis Railway; for two years consulting surgeon of the Lexington and St. Louis division of the southern railway system; a member of the American Medical Association; in 1903 first vice-president of the Southern Railway Surgeons' Association; one of the founders of the Dubois County Medical Association, and a member of the Indiana State Medical Society, died from apoplexy at his home in Huntingsburg, Ind., October 23, aged 60. He was for two years president and for six years a member of the board of control of the Indiana Southern Hospital for the Insane.

Robert Wood Mitchell, M.D. Tulane University, New Orleans, 1856, a member of the American Medical Association, American Public Health Association, Medical Society of the State of Tennessee, Memphis and Shelby County Medical Society and National Board of Health, professor of materia medica in Memphis Medical College, founder of the City Hospital, Memphis, secretary of the local board of health, during the Civil War regimental, brigade and division surgeon in the Confederate service; a pioneer practitioner of Memphis, who performed faithful work in yellow fever epidemics and was made one of the board appointed by congress to investigate the cause of yellow fever, died at his home in Memphis, November 2, from heart disease, after a brief illness, aged 71.

Simon Pollak, M.D. University of Vienna, Austria, 1835, the oldest practitioner of St. Louis; a member of the American Medical Association; one of the founders of the Missouri State School for the Blind, who opened, in 1861, the first eye and ear clinic west of the Mississippi, died at his home in St. Louis, October 31, aged 90. During the Civil War he served on the U. S. Sanitary Commission. He was many times treasurer and once president of the St. Louis Medical Society. Dr. Pollak was one of the quartet of St. Louis veteran physicians in whose honor a banquet was given by the medical profession of the city on April 14 last.

Archibald Atkinson, M.D. University of Pennsylvania, Philadelphia, 1854, afterward a student in Dublin and Paris for two years; brigade surgeon in the Confederate service during the Civil War; professor of materia medica and therapeutics in the College of Physicians and surgeons, Baltimore, and later in the Baltimore Medical College, died at his home in Baltimore, October 29, from Bright's disease, aged 71.

Leon de Chesne, M.D. University of Louvain, Belgium, 1879, a member of the American Medical Association and the Wisconsin State Medical Society, and for thirteen years a prominent practitioner of Sturgeon Bay, Wis., died at Presbyterian Hospital, Chicago, October 28, from carcinoma of the tongue, after an illness of nine months, aged 51.

Lorenzo Traver, M.D. Albany (N. Y.) Medical College, 1857, surgeon U. S. Navy until 1868, and thereafter a resident of Providence, R. I.; a member of the American Medical Association, Rhode Island Medical Association and Providence Medical Association, died at his home in Providence, October 24, aged 69.

Stephen L. Blachly, M.D. Jefferson Medical College, Philadelphia, 1870, for fifty years a practitioner in Washington County, Pa., and for several years president of the county society, died at his home in Wilkinsburg, Pa., October 28, after a long illness, aged 87. He retired from active practice in 1890.

Joseph Billings Morton, M.D. College of Physicians and Surgeons, New York, 1849, the oldest practitioner in New Jersey, who for several years had compiled the weather reports for the Signal Service Bureau of Elizabeth, died at his home in that city, November 2, aged 77.

Wakeman Briarly Munnikhuysen, M.D. University of Pennsylvania, Philadelphia, 1869, a surgeon in the German army during the Franco-Prussian War, died at his home in Belair, Md., October 27, from paralysis, after a partial invalidism of two years, aged 59.

A. D. Binkerd, M.D. Long Island College Hospital, Brooklyn, 1864, formerly assistant surgeon Third Company U. S. Heavy Artillery, died at his home in Miller's Eddy, West Monterey, Pa., October 27, after a short illness from neuralgia of the heart, aged 78.

Bernard A. Daly, M.D. University College of Medicine, Richmond, Va., 1899, died at his home in Newark, N. J., November 2, from septicemia, resulting from a slight wound received during a surgical operation, four weeks before, aged 27.

John B. Weaver, M.D. Michigan College of Medicine, Detroit, 1881, died suddenly in the City Hall, Lansing, Mich., October 31, aged about 50. Death is supposed to have been due to rheumatism of the heart.

Thomas James Davis, M.D. University of Vermont, Burlington, 1885, superintendent of Charity Hospital, formerly McKane Hospital, Savannah, Ga., died at Sheepshead Bay, N. Y., November 5.

Benjamin Elmore Kell, M.D. Bellevue Hospital Medical College, New York, 1890, of Chester, S. C., died, October 30, at the home of his father, Dr. James T. Kell, Ardreys, N. C., after a long illness.

Robert C. Downey, M.D. Starling Medical College, Columbus, 1864, surgeon of the Thirteenth Ohio Volunteer Cavalry in the Civil War, died at his home in Caldwell, Ohio, October 22, aged 69.

Joseph T. Battle, M.D. Medical College of Georgia, Augusta, 1868, died at his home in Highland Park, Montgomery, Ala., October 22, from rheumatism, after an illness of several days.

Patrick Curran, M.D. Rush Medical College, Chicago, 1878, of Chicago, died at Fort Worth, Texas, where he had gone a year ago for the benefit of his health, October 28, aged 75.

Harvey P. Cox, M.D. University of Louisville, Ky., 1876, of Mackville, Ky., died at the Gray Street Infirmary, Louisville, October 29, from cirrhosis of the liver, aged 51.

Albert U. Evarts, M.D. Louisville Medical College, 1871, died at his home in Laporte City, Iowa, November 3 after a short illness, from Bright's disease, aged 60.

Caleb C. Libby, M.D., a member of the state senate, died at his home in East Pittston, Me., October 27, from kidney disease, after a long illness, aged 56.

Silas Edwin **Akers, M.D.** University College of Medicine, Richmond, Va., 1898, died at his home at Willis, Va., October 22, from typhoid fever, aged 31.

R. R. **MacFarlane, M.D.** Trinity College, Toronto, of Seattle, Wash., and Dawson, N. W. Territory, was found dead on a train in Montana, October 24.

Louis **Ronchi, M.D.** Royal Medical College, Rome, Italy, was asphyxiated by gas at his boarding house in New York, November 3.

E. B. **Williams, M.D.,** died at Nome, Alaska, September 11, from heart disease, aged 48.

Deaths Abroad.

Otto J. F. **Nasse, M.D.,** professor of pharmacology and physiologic chemistry at Rostock from 1880 to 1899, died at Freiburg, October 20. He was a prolific writer on his specialty, and besides his contributions to Pflüger's *Archiv* and other periodicals he published works on the physiology of peristalsis and on the striped muscle substance. His successor at Rostock is Prof. Rudolf Kobert, whose name is also well known by his numerous publications.

D. **Tibone, M.D.,** one of the most prominent gynecologists of Italy, died suddenly at Rome, October 7, aged 70. He had been professor of obstetrics and gynecology at Turin for thirty-eight years.

Friedrich **Betz, M.D.,** died at Heilbronn, October 19, aged 84. He founded the medical journal, *Memorabilien,* in 1856, and conducted it until last year, when its suspension was announced.

R. **Seccondi, M.D.,** professor of ophthalmology at Genoa and a prominent member of the Italian senate.

Miscellany.

CLIPPINGS FROM LAY EXCHANGES.

ANTEMORTEM INQUEST.

"Dr. —— of the State Board of Health was in town yesterday, to hold an inquest over ——, who is suffering from smallpox."—*Houtzdale* (Pa.) *Citizen,* Oct. 9, 1900.

NEW INSTRUMENT.

"Dr. —— . . . does not think the sleeping sickness is caused by a microbe, but by a trysanasometer belonging to the same group of parasites which attacks cattle."—*N. Y. Sun,* Nov. 1, 1903.

POSTMORTEM HEMORRHAGE CAUSES DEATH.

In the biennial report of Queen's Hospital, Honolulu, Hawaii, published in the *Honolulu Bulletin* of August 20, death is said to have been due, in one instance, to "postmortem hemorrhage."

INVOLUTION.

"Dr. —— of Chicago may take the work at Grand Avenue Chapel. . . . . Dr. —— is a converted physician, so he says, until a few years ago he practiced in ——."—*Crawfordsville* (Ind.) *Journal,* September 21.

RENAL CHOLELITHIASIS.

"The many Vermillion friends of —— learn with much regret of his serious condition with kidney trouble. He will submit to an operation in Chicago soon for the removal of a gallstone from his kidneys. . . . ."

NASAL DYSMENORRHEA.

"Dr. —— then read the next paper, which was entitled 'A New Treatment for Dysmenorrhea.' The chief treatment of this nasal infection was cocaine . . . .—Memphis (Tenn.) Report of Mississippi Valley Medical Association.

NEW LOCALITY FOR CANCER.

"Prof. ——, an eminent physician and member of the senate, publishes to-day a long article to demonstrate that —— died of a tuberculosis cancer on the right hydrothorax."—*Rutland* (Vt.) *Evening News,* September 11, and other newspapers.

POST HOC, PROPTER HOC?

In a list of companies incorporated, published in the *New York Journal of Commerce,* Sept. 2, 1903, is "The Mutual Medical Company—Objects: furnish medical attendance and subsequently bury the dead; capital $2,000. Incorporators . . ."

AN ORACULAR JURY.

"A coroner's jury in Holly, in its verdict on the death of a suicide, found that 'the oracle of his heart was weak, and he would soon have died of rupture of the oracle if he had not taken his own life."—*Grand Rapids* (Mich.) *Evening Press,* October 3.

MEDICAL STUDENTS CUT THROAT.

"——, who has been deaf and dumb for four years as the result of a mining accident . . . . has been restored to speech and hearing by students of —— Medical College, Chicago, ... who cut ——'s throat open and removed clots of blood and supplied him with artificial eardrums."—*Chicago Tribune,* October 26.

State Boards of Registration.

COMING EXAMINATIONS.

Board of Medical Examiners of the State of California, City Hall, San Francisco, Dec. 1.

New Mexico Board of Health, Santa Fe, Dec. 7.

Examining Board of Medical Society of Delaware, Dover, Dec. 8.

Board of the Homeopathic Medical Society of Delaware State and Peninsula, Wilmington, Dec. 8.

Ohio State Board of Medical Registration and Examination, Columbus, Dec. 8, 9 and 10.

Missouri State Board of Health, Southern Hotel, St. Louis, Dec. 14, 15 and 16.

Medical Council, Philadelphia, Dec. 15.

Medical Examining Board of Virginia, Lynchburg, Dec. 15-18.

Colorado State Board of Medical Examiners, 1723 Tremont St., Denver, Dec. 22, 23 and 24.

North Dakota Report.—The North Dakota State Medical Examining Board, at Grand Forks, October 6 to 8, held a written examination, at which 11 out of 14 applicants passed, a grade of 75 per cent. being required and questions being asked in 13 subjects.

PASSED.

College.	Year Grad.	Per Cent.
University of Minnesota	1903	78
University of Minnesota	1903	85
University of Michigan	1903	83
University of Christiania, Sweden	1893	83
Hamline University	1901	76
Kansas City Medical College	1903	83
Northwestern University, Chicago	1903	92
Harvard Medical School	1900	82
Hering Medical College, Chicago	1903	79
Johns Hopkins University, Baltimore	1902	81
College of Physicians and Surgeons, Chicago	1903	76

FAILED.

College of Physicians and Surgeons, Keokuk	1902	65
College of Physicians and Surgeons, Keokuk	1897	70
Starling Medical College, Columbus	....	72

Idaho Report.—Dr. R. L. Nourse, Hailey, secretary of the Idaho State Board of Medical Examiners, reports the written examination held at Boise, October 6 to 8, as follows: Subjects, 12; questions, 120; percentage required, 75; examined, 24; passed, 19; failed, 5.

PASSED.

College.	Year Grad.	Per Cent.
Columbia University, New York	1898	87
Barnes Medical College, St. Louis	1903	80.6
Barnes Medical College, St. Louis	1903	78.1
Hahnemann Medical College, Chicago	1902	75.6
Jefferson Medical College, Philadelphia	1902	76.6
Jefferson Medical College, Philadelphia	1896	79.2
Beaumont Medical College, St. Louis	1901	82.6
Creighton Medical College, Omaha	1902	92.6
University of Michigan	1903	87
College of Physicians and Surgeons, Chicago	1893	86.9
Rush Medical College, Chicago	1903	78.3
Rush Medical College, Chicago	1901	89.3
Northwestern University, Chicago	1902	84.9
Harvey Medical College, Chicago	1901	76.9
Keokuk Medical College, Iowa	1892	84.3
University of Colorado, Boulder	1901	84.5
University of Colorado, Boulder	1903	86.3
University of Colorado, Boulder	1903	79.2
University of Minnesota	1901	80.9

FAILED.

Kansas Medical College, Topeka	1895	65.2
Jefferson Medical College, Philadelphia	1895	74.3
Kentucky School of Medicine, Louisville	1879	35.9
College of Physicians and Surgeons, Kansas City	1902	61.6
Rush Medical College, Chicago	1902	74.6

Georgia Report.—Dr. I. H. Goss, Athens, secretary of the Georgia State Board of Medical Examiners, reports the written examination at Atlanta, October 13, as follows: Number of subjects examined in 10; total questions, 56; percentage required to pass, 75; examined, 27; passed, 25; failed, 2.

PASSED.

College.	Year Grad.	Per Cent.
Atlanta College of Physicians and Surgeons	1903	*76
Atlanta College of Physicians and Surgeons	1903	76
Atlanta College of Physicians and Surgeons	1903	85
Atlanta College of Physicians and Surgeons	1903	75
Atlanta College of Physicians and Surgeons	1903	75
Atlanta College of Physicians and Surgeons	1903	75
Leonard Medical College	1903	79
Leonard Medical College	1903	75
Johns Hopkins Medical College	1900	89
Jefferson Medical College	1903	85
Jefferson Medical College	1903	84
Univ. and Bellevue Hospital Med. College, New York	1903	84
Univ. and Bellevue Hospital Med. College, New York	1903	85
Tulane University	1903	88
Baltimore College of Physicians and Surgeons	1903	85
Baltimore College of Physicians and Surgeons	1903	82
Grant University	1903	78
Meharry Medical College	1903	77
University of Maryland	1903	86
University of Maryland	1903	81
University of Maryland	1903	84
University of Georgia	1899	75
University of Louisville	1903	88
Vanderbilt University	1894	78
Southern Medical College	1894	84

FAILED.

Atlanta Medical College	....	..
Atlanta Medical College	....	..

* Second examination.

Association News.

New members for the month of October, 1903.

ALABAMA.

Duncan, W. P., Birmingham.

ARKANSAS.

Breathwit, William, Draughon.
Moorhead, W. H., Stuttgart.
Tarkington, A. R., Hot Springs.
Wyatt, William A., Rosie.

CALIFORNIA.

Spalding, O. B., San Francisco.
Campbell, Mary P., San Francisco.
Meyer, J. H., San Barnardino.
Stivers, Charles G., Los Angeles.

COLORADO.

Jaffa, Perry, Trinidad.
Oertel, Henry B., Pueblo.
Gengenbach, F. P., Denver.
Davenport, R. G., Trinidad.
Kahn, S. G., Leadville.

CONNECTICUT.

Steele, H. M., New Haven.
Bailey, M. A., Hartford.
Bunce, Philip D., Hartford.
Dowling, John F., Hartford.

DISTRICT OF COLUMBIA.

Howard, C. Norman, Washington.

GEORGIA.

Oertel, T. E., Augusta.

ILLINOIS.

Reiterman, Charles, Chicago.
Rowan, Charles J., Chicago.
Zurawski, K. A., Chicago.
Pence, C. D., Chicago.
Armstrong, Guy L., Taylorville.
Fitzgerald, Frank, Morrison.
Dickerson, Jas. H., Taylorville.
Hill, T. F., Athens.
Alexander, John W., Oakland.
Pickard, W. S., Maywood.

INDIANA.

Ray, Frank E., Shelbyville.
Spencer, M. W., Boston.
Suttner, C. N., Elwood.
Pothuisje, P. J., Remington.

IOWA.

Welsh, F. E., Rutland.
Gullison, Andrew, Lake Mills.
Arenschild, E. M., Ottumwa.
Hughes, Sarah L., Burlington.
Welpton, H. G., Des Moines.
Kasten, W. C., Fort Madison.
Mulligan, W. W., Burlington.
Ely, Frank A., Des Moines.
Schwabland, W. T., Lester.
Huband, Charles E., Ottumwa.
Eiel, H. E., Buffalo Center.
Rogers, Arthur M., Wapello.

KANSAS.

Linley, Hubbard, Atchison.
Miller, William E., Muscotah.

KENTUCKY.

Ogilvie, R. W., Princeton.
Anderson, V. V., Barbourville.
Hall, G. C., Louisville.
Forsythe, W. H., Lexington.

LOUISIANA.

Cocker, George F., New Orleans.
Moss, A. H., Lake Charles.
Haydel, J. J., Plancheville.

MAINE.

Emmons, George P., Lewiston.

MARYLAND.

Getz, Charles, Baltimore.
Griffith, L. A., Upper Marlboro.

MASSACHUSETTS.

Adams, G. E., Worcester.
Barrell, Mary E., Worcester.
Holbrook, B., West Newton.
Hazlett, Olive B., Malden.

MICHIGAN.

May, George A., Ann Arbor.
Lynam, T. P., Ironwood.
Cope, Charles S., Ionia.
Wilson, Walter J., Jr., Detroit.
Bender, Frederick P., Caro.
Haskins, Mary G., Detroit.
Lindbohm, Albert W., Ironwood.
Ganung, Cora Pope, Lansing.
Kenyon, Frank P., Plymouth.
Read, L. C., Grand Rapids.

MINNESOTA.

Hirschfield, M. S., Deer Creek.
Weston, C. G., Minneapolis.
Titus, Jerome H., Sacred Heart.

MISSISSIPPI.

Fountain, J. G., Pearlington.
Hunnicutt, W. J., Poplarville.
Anderson, Jacob M., Itta Bena.

MISSOURI.

Moore, Roy D., Central.
Barnes, Algenon S., St. Louis.
McGill, W. J., St. Joseph.
Putman, Ola, Marceline.
Pierpoint, J. E., Skidmore.
Viedt, E. J., Rockville.
Woolsey, N. B., Braymer.
Gleaves, O. G., St. Joseph.
Kirchner, Walter C. G., St. Louis.
Clark, Wm. A., Jefferson City.
Talbott, Hudson, St. Louis.
Thomas, C. E., St. Joseph.
Ayres, Samuel, Kansas City.
Burns, Robert, St. Louis.

NEBRASKA.

Lansing, L. A., Emerson.
Leahy, Bartholomew J., Jackson.
Johnson, Andrew, Beatrice.
Fast, W. S., Falls City.
Kelly, Thomas, South Omaha.
Schindel, Charles M., S. Omaha.
Walker, William H., Omaha.
Lake, Frederick W., Omaha.
Arnold, Harry L., Omaha.
Smith, Seymour H., Omaha.
Pollard, Charles W., Omaha.
Moore, J. C., Omaha.
Ludington, Paul H., Omaha.
Rix, Rudolph, Omaha.

NEW HAMPSHIRE.

Stickney, H. L., Manchester.

NEW JERSEY.

Dunlap, Thomas G., Atlantic City.
Marshall, Jos. C., Atlantic City.
Russell, Anthony B., East Orange.
Warner, W. B., Red Bank.
Wood, Frank M., Camden.
Reed, James J., Sea Bright.
Quinby, William O'G., Newark.
Leaver, Morris H., Quakertown.
Diverty, Henry B., Woodbury.
Houck, William J., Newark.

NEW YORK.

York, George W., Buffalo.
O'Neill, James M., Buffalo.
Corcoran, Walter J., Brooklyn.
Sanders, Jos. A., Clifton Springs.
Bainbridge, W. S., New York City.
Lambert, W. E., New York City.
Bennett, T. L., New York City.
Shepard, W. H., New York City.
Coe, J. W., New York City.
Kilmer, T. W., New York City.
Truman, Irving P., Hornellsville.
Meany, Edw., Ithaca.
Helwig, Frank A., Akron.
Cotton, John, Burnt Mills.
Cocke, Wm. I., Port Washington.
Butler, Andrew J., Unadilla.

OHIO.

Clark, F. S., Cleveland.
Hole, Charles M., Cleveland.
Moorehouse, Geo. W., Cleveland.
Stuart, Charles C., Cleveland.
Kaier, A. F., Columbus.
Pepper, L. C., Loramie.
Hannum, B. G., Cleveland.
Morris, W. E., Lisbon.
Goodman, S. J., Columbus.
McKitrick, Llewellyn, Dublin.
Lewis, William F., Martinsburg.
Stout, J. J., Luhrig.
Taylor, Martin, Fort Recovery.
Moses, Jacob B., Crestline.
Cosler, Harry A., North Hampton.
Wittenmyer, J. M., Peebles.
Marquart, C. A., Crestline.

OKLAHOMA.

Rucks, William W., Guthrie.
Hamilton, W. S., Norman.

PENNSYLVANIA.

Booth, Bradford A., Pittsburg.
Heckel, E. B., Pittsburg.
Shaw, James P., Pittsburg.
Brown, John R., Pittsburg.
Burke, John G., Pittsburg.
Butler, Ralph, Philadelphia.
Rhoads, Edw. G., Philadelphia.
Peter, Luther C., Philadelphia.
Moore, John D., Philadelphia.
Megargee, Geo. L., Philadelphia.
Biedert, Chas. C., Philadelphia.
Currie, Thos. R., Philadelphia.
Piersol, Geo. A., Philadelphia.
Edsall, David S., Philadelphia.
Harland, W. G. B., Philadelphia.
Babbitt, Jas. A., Philadelphia.
Griscom, Mary W., Philadelphia.
McCombs, Robt. S., Philadelphia.
Hatfield, Chas. J., Philadelphia.
Traver, S. N., Steelton.
Gruver, Arthur B., Erie.
Lloyd, John H., Erie.
Haben, John F., McKeesport.
Bryant, F. Otis, Chester.
Mowery, Jacob L., Lancaster.
Snyder, Francis J., York.
Yagle, George N., Red Lion.
McLaughlin, C. M., Greencastle.
Brown, O. S., Warren.
Crandal, George D., Blossburg.
McKinley, H. Clay, Meyersdale.
Merryman, John W., Leonard.
Dunkle, Gaily B., Washington.
Robinhold, D. Guy, Forty Fort.
Haines, Samuel H., Bradford.
Shindel, Will L., Sunbury.
Kinard, George C., Lincoln.
Follmer, James B., Berwick.
Canfield, H. A., Bradford.
Wycoff, George R., Duquesne.
Brown, Alex. MacL., Franklin.
De Bashore, Simeon, Palmyra.
Berge, William H., Avoca.
McKown, H. L., Tunkhannock.
Johnson, William M., Venango.
Casselberry, C. M., Pottstown.
Iland, Edw. M., Corsopolis.
Kuhns, Harry B., Neale.
Pennell, H. Y., E. Downingtown.
Gaston, Ida E., Philadelphia.
Backenstoe, W. A., Emaus.
Young, James K., Philadelphia.
Bliss, A. A., Philadelphia.
Crueger, E. A., Philadelphia.
Cary, Ezra H., Prosperity.
Hitschler, W. A., Philadelphia.
Fleckenstine, H., Newportville.
Good, W. H., Philadelphia.
Gerhard, S. P., Philadelphia.
Pottberg, Charles, Philadelphia.
O'Reilly, Chas. A., Philadelphia.
Morton, T. S. K., Philadelphia.
Williamson, J. J. G., Philadelphia.
McCaraghy, A., Philadelphia.
Trever, C. W. L., Philadelphia.
Johnson, A. R., New Bloomfield.
Carr, William H., Lancaster.
Reynolds, J. Hervey, Bellevue.
Sumney, F. F., Dravosburg.
Rice, Daniel S., Hastings.
Pratt, C. Manville, Towanda.
Wright, Theodore, Dushore.

RHODE ISLAND.

Bacon, Edw. S., Providence.
Barker, Christopher F., Newport.
Jordan, William H., Providence.
Ecroyd, Henry, Newport.

SOUTH CAROLINA.

Hofman, Van Telburg, Sumter.

SOUTH DAKOTA.

Tilton, A. L., Leslie.

TENNESSEE.

Rice, John C., Braden.
Tucker, R. O., Nashville.
Wilson, Henry B., Chattanooga.
Branch, Benj. L., Collierville.

TEXAS.

Martin, J. M., Hillsboro.
Palmer, Hal J., Yarboro.
Whitworth, Albert J., Yarboro.
Wagner, Steven V., Houston.

UTAH.

Condon, A. S., Ogden.

VIRGINIA.

Dalton, Martin L., Floyd.

WASHINGTON.

Hastings, William C., Seattle.

WEST VIRGINIA.

Fox, Joseph A., Hinton.

WISCONSIN.

Conroy, J. M., Neillsville.
Herron, Allen L., Milwaukee.
Sandborn, M. J., Appleton.
Vollmer, Alfred M., Superior.
Shaw, A. O., Ashland.
Sauerhering, Douglas L., Wausau.
Pomainville, F., Grand Rapids.
Dogherty, C. F., Muscoda.
Jones, John R., Randolph.

The Public Service.

Army Changes.

Memorandum of changes of station and duties of medical officers U. S. Army, for the week ending Nov. 7, 1903:

Brooks, William H., asst.-surgeon, ordered to proceed from Vancouver Barracks to Fort Walla Walla, Wash., to accompany the Thirtieth Battery Field Artillery, en route to Fort Snelling, Minn. On completion of this duty, granted thirty days' leave of absence.

Rand, Irving W., asst.-surgeon, granted thirty days' leave of absence, with permission to apply for thirty days' extension.

Greenleaf, Henry S., asst.-surgeon, relieved from further duty at Presidio of San Francisco, Cal., and ordered to Fort Moultrie, S. C.

Henderson, A. B., asst.-surgeon, ordered before Army retiring board at Denver, Colo.

Roberts, William, asst.-surgeon, granted three months' sick leave on arrival of medical officer at Fort Brady, Mich.

Howard, Deane C., asst.-surgeon, ordered to U. S. Army General Hospital, Washington Barracks, D. C., for duty.

Patterson, Edwin W., contract surgeon, serving in the Division of the Philippines, granted leave of absence for three months in the United States.

Stoney, Randell C., contract surgeon, relieved from temporary duty at Fort Dupont, Del., and ordered to Fort Revere, Mass., for temporary duty; relieving Contract Surgeon Raoul A. Amador, U. S. A., granted leave of absence for one month and fifteen days.

Ames, Roger P., contract surgeon, relieved from duty at Fort Barrancas, Fla., and assigned to duty at Fort McIntosh, Texas.

Hogan, David D., contract surgeon, now on two months' leave from the Division of the Philippines, has been granted an extension of leave of one month.

Baker, Charles L., contract surgeon, relieved from duty at Fort Baker, Cal., and ordered to Camp McKinley, Honolulu, H. I.

Burr, Rollin T., contract surgeon, returned to duty at Cabana Barracks, Havana, Cuba, from temporary duty at Headquarters Artillery Forces in Cuba, where he has been since February last.

Woods, Oscar W., contract surgeon, relieved from temporary duty at Fort Casey, Wash., and ordered to Fort Wright, Wash.

McCall, James H., contract surgeon, returned to his station, Columbia Arsenal, Tenn., from duty at Camp Young, West Point, Ky., and accompanying troops to Fort Sheridan, Ill.

Rhoades, Rex H., contract dental surgeon, relieved from duty at Fort Leavenworth, Kas., and ordered to the Philippines for duty.

Fisher, William C., contract dental surgeon, ordered from Fort Sheridan, Ill., to Fort Wayne, Mich.

Stone, Frank P., contract dental surgeon, ordered from the Philippines to the General Hospital, Presidio of San Francisco, for treatment.

Navy Changes.

Changes in the Medical Corps of the Navy for the week ending Nov. 7, 1903:

Elliott, M. S., surgeon, ordered to the Naval Hospital, Norfolk, Va.

Evans, S. G., surgeon, detached from Naval Hospital, Norfolk, Va., and ordered to the U. S. S. *Cleveland*.

Wheeler, W. M., surgeon, detached from the Naval Hospital, Newport, R. I., and granted leave of absence for thirty days.

Blackwell, E. M., P. A. surgeon, detached from the U. S. R. S. *Hancock* and ordered to the U. S. S. *Castine*.

Spear, R., P. A. surgeon, detached from the U. S. S. *Wheeling* and ordered home to await orders.

Odell, H. E., P. A. surgeon, detached from the Naval Hospital, Norfolk, Va., and ordered to the U. S. S. *Wheeling*.

Murphy, J. A., asst.-surgeon, ordered to the Navy Yard, Washington, D. C.

Richardson, F. A., A. A. surgeon, ordered to the Naval Hospital, Newport, R. I.

Schwerin, L. H., A. A. surgeon, detached from the U. S. S. *Yankton* and ordered to the U. S. S. *Southery*.

Elmer, M. K., asst.-surgeon, detached from the U. S. R. S. *Independence* and ordered to the U. S. T. S. *Pensacola*.

Dabney, V., A. A. surgeon, detached from the U. S. T. S. *Pensacola* and ordered to duty with Recruiting Party No. 4.

Chapman, R. B., A. A. surgeon, detached from duty with Recruiting Party No. 4 and ordered to the Navy Yard, Mare Island, Cal.

Taylor, E. C., and I. S. K. Reeves, asst.-surgeons, ordered to the Naval Museum of Hygiene and Medical School, Washington, D. C.

Marsteller, E. H., surgeon, ordered to the U. S. S. *Columbia*.

Kennedy, J. T., P. A. surgeon, commissioned passed assistant surgeon, with rank of lieutenant.

Ohnesorg, K., P. A. surgeon, commissioned passed assistant surgeon, with rank of lieutenant, from March 3, 1903.

Miller, J., and F. E. Campbell, asst.-surgeons, ordered to Naval Museum of Hygiene and Medical School, Washington, D. C.

High, W. E. G., asst.-surgeon, ordered to the U. S. T. S. *Constellation*.

Marine-Hospital Service.

Official list of the changes of station and duties of commissioned and non-commisioned officers of the Public Health and Marine-Hospital Service for the two weeks ended Nov. 5, 1903:

Surgeon J. M. Gassaway, granted extension of leave of absence for one month from October 13.

Surgeon P. C. Kalloch, to proceed to Dorchester, Mass., for special temporary duty.

Surgeon S. D. Brooks, detailed as inspector of the Marine Hospital and unserviceable property at Mobile, Ala.

Surgeon H. R. Carter, granted leave of absence for one day, Oct. 29, 1903, under paragraph 189 of the Regulations.

Assistant Surgeon General G. T. Vaughan, appointed as member of committee to consider and report on the matter of uniforms and insignia for officers and employes of the Customs Service.

Asst.-Surgeon W. C. Billings, relieved from duty at Quebec, Canada, and assigned to duty in the office of the U. S. Commissioner of Immigration at St. Johns, N. B.

Asst.-Surgeon J. W. Kerr, granted leave of absence for two days from Oct. 18, 1903, under paragraph 191 of the Regulations. Relieved from duty at the Immigration Depot, New York, and directed to proceed to Duluth, Minn., for temporary duty as medical inspector of aliens.

Asst.-Surgeon H. A. Stansfield, granted leave of absence for ten days. On expiration of leave to report at Bureau, Washington, D. C.

Asst.-Surgeon C. W. Wille, relieved from duty at Philadelphia and directed to proceed to Baltimore and report to medical officer in command for duty and assignment to quarters.

Asst.-Surgeon J. S. Boggess, granted leave of absence for three days from November 3.

P. A. Surgeon J. C. Perry, to proceed to Lexington, Va., for special temporary duty.

P. A. Surgeon J. A. Nydegger, Bureau letter of Oct. 10, 1903, granting him leave of absence for one month, amended so that leave shall be for twenty-nine days from September 23.

P. A. Surgeon H. W. Wickes, granted leave of absence for two days from October 28.

P. A. Surgeon M. H. Foster, granted leave of absence for fifteen days from November 3.

P. A. Surgeon J. F. Anderson, to proceed to Lexington, Va., for special temporary duty.

A. A. Surgeon J. F. Bullard, granted leave of absence for four days from October 29.

A. A. Surgeon B. W. Goldsborough, Department letter granting him leave of absence for three weeks from Sept. 22, 1903, amended to read thirteen days.

A. A. Surgeon J. M. Jackson, Jr., Department letter granting him leave of absence for thirty days from Oct. 5, 1903, amended so as to read thirty days from October 26.

A. A. Surgeon N. V. Safford, granted leave of absence for three days from Oct. 23, 1903, under paragraph 191 of the Regulations.

A. A. Surgeon F. M. Clarke, granted leave of absence for twenty days from November 8.

A. A. Surgeon D. M. Echemendia, granted leave of absence, on account of sickness, for thirty days from October 5.

A. A. Surgeon J. W. Tappan, granted leave of absence for seven days from Nov. 2, 1903, under paragraph 191 of the Regulations.

Pharmacist John Achenbach, granted leave of absence for six days from Oct. 26, 1903, under paragraph 210 of the Regulations.

BOARDS CONVENED.

Board convened at Baltimore, Nov. 2, 1903, for the physical examination of an officer of the Revenue-Cutter Service. Detail for the board: Surgeon H. B. Carter, chairman; Asst.-Surgeon M. W. Glover, recorder.

Board convened at Washington, D. C., Oct. 29, 1903, for the physical examination of an officer of the Revenue-Cutter Service. Detail for the board: Assistant Surgeon-General W. J. Pettus, chairman; Asst.-Surgeon A. J. McLaughlin, recorder.

Board convened at Philadelphia, Oct. 30, 1903, for the physical examination of an officer of the Revenue-Cutter Service. Detail for the board: Asst.-Surgeon W. A. Korn, chairman; Asst.-Surgeon C. W. Wille, recorder.

PROMOTION.

Asst.-Surgeon J. C. Hobdy commissioned (recess) as passed assistant surgeon in the Public Health and Marine-Hospital Service, to rank as such from Aug. 15, 1903.

APPOINTMENT.

W. J. S. Stewart, appointed acting assistant surgeon for duty at Rio de Janeiro, Brazil.

CASUALTIES.

Asst.-Surgeon C. E. Decker, died Oct. 21, 1903.
A. A. Surgeon C. B. Sweeting, died Oct. 4, 1903.

Health Reports.

The following cases of smallpox, yellow fever, cholera and plague have been reported to the Surgeon-General, Public Health and Marine-Hospital Service, during the week ended Nov. 6, 1903.

SMALLPOX—UNITED STATES.

Alabama: Mobile, Oct. 25-31, 7 cases.
California: San Francisco, Oct. 19-25, 2 cases.
Colorado: Denver, Sept. 27-Oct. 17, 14 cases.
Illinois: Belleville, Oct. 25-31, 7 cases; Chicago, Oct. 25-31, 1 case.
Indiana: Evansville, Oct. 18-24, 1 case, imported.
Louisiana: New Orleans, Oct. 25-31, 1 case.
Maryland: Cumberland, Oct. 1-31, 1 case.
Massachusetts: Boston, Oct. 25-31, 1 case.
New Hampshire: Manchester, Oct. 25-31, 7 cases.
New York: New York City, Oct. 25-31, 1 case.
Ohio: Cincinnati, Oct. 24-30, 4 cases; Cleveland, Oct. 25-31, 2 cases.
Pennsylvania: Erie, Oct. 25-31, 1 case; Johnstown, Oct. 25-31, 6 cases, 2 deaths; Philadelphia, Oct. 25-31, 13 cases, 8 deaths; Pittsburg, Oct. 18-31, 96 cases, 12 deaths, 1 case imported.

SMALLPOX—FOREIGN.

Argentina: Buenos Ayres, Aug. 1-31, 12 deaths.
Belgium: Antwerp, Oct. 4-10, 2 cases.
Brazil: Rio de Janeiro, Sept. 28-Oct. 11, 117 cases, 64 deaths.
Colombia: Barranquilla, Oct. 5-18, 3 deaths.
France: Paris, Oct. 12-17, 1 case, 1 death; Rouen, Sept. 1-30, 5 cases.
Great Britain: Birmingham, Oct. 11-17, 1 case; Glasgow, Oct. 17-23, 1 death; Liverpool, Oct. 11-17, 4 cases; London, Oct. 11-17, 11 cases; Manchester, Oct. 11-17, 5 cases; Newcastle-on-Tyne, Oct. 11-17, 6 cases.
Greece: Athens, Oct. 4-10, 1 case.
Guiana: Demorara, Aug. 29-Sept. 26, 326 cases, 1 death.
India: Bombay, Sept. 30-Oct. 6, 2 deaths.
Hawaiian Islands: Honolulu, Sept. 1-30, 3 cases, 2 deaths.
Japan: Yokohama, Jan. 1-Sept. 19, 2 cases.
Malta: Oct. 13-19, 1 case.
Mexico: City of Mexico, Oct. 12-18, 2 cases, 2 deaths.
Russia: Moscow, Oct. 4-10, 4 cases; St. Petersburg, Oct. 4-10, 19 cases; Warsaw, Sept. 20-26, 3 deaths.
Spain: Bacelona, Oct. 11-17, 5 deaths.
Turkey: Smyrna, Oct. 5-11, 59 deaths.
Uruguay: Montevideo, June 5-Sept. 5, 10 cases.

YELLOW FEVER—UNITED STATES.

Texas: Connel, Nov. 3, 1 case: Laredo, Oct. 28-Nov. 4, 81 cases, 20 deaths; Minera, Oct. 30, 1 case; San Antonio, Oct. 27-Nov. 2, 4 cases, 3 deaths; Dewitt County, to Nov. 4, 5 cases, 1 death.

YELLOW FEVER—FOREIGN.

Brazil, Rio de Janeiro, Sept. 28-Oct. 11, 4 cases, 3 deaths.
Costa Rica: Limon, Oct. 22, 1 case.

Mexico, Tampico, Oct. 11-24, 4 deaths; Vera Cruz, Oct. 19-24, 41 cases, 12 deaths.
Jamaica: Port Royal, Oct. 11-17, 4 cases.

CHOLERA—FOREIGN.

India: Madras, Sept. 19-Oct. 2, 4 deaths.
Japan: Kobe, Sept. 27-Oct. 3, 2 cases, 1 death; Nagasaki, Oct. 26, present.
Turkey: Arghani-Maaden, Oct. 6, 2 cases; Gerger, Oct. 6, 4 cases; Syria, Sept. 28-Oct. 5, 743 cases, 635 deaths.

PLAGUE—FOREIGN.

Brazil: Rio de Janeiro, Sept. 28-Oct. 11, 80 cases, 31 deaths.
Egypt: Alexandria, Oct. 3-10, 7 cases, 2 deaths.
India: Bombay, Sept. 30-Oct. 6, 76 deaths.
Japan: Yokohama, Sept. 13-26, 2 cases, 2 deaths.
Mauritius: Sept. 18-Oct. 1, 104 cases, 76 deaths.
South Africa: East London, Sept. 6-19, 1 case, 1 death; Port Elizabeth, Sept. 6-19, 1 case.
Turkey: Syria, Damascus, Oct. 19, present; Hama, Oct. 19, present; Homa, Oct. 19, present; Tripoli, Oct. 19, present.

Medical Organization.

California.

KERN COUNTY MEDICAL ASSOCIATION.—At the meeting held in Bakersfield, October 19, the society adopted the standard constitution and by-laws, and elected Dr. Clarence W. Kellogg, Kern, president; Dr. J. L. Carson, Bakersfield, vice-president, and Dr. William S. Fowler, Bakersfield, secretary.

SONOMA COUNTY MEDICAL SOCIETY.—The physicians of the county met at Santa Rosa, October 21, to consider the organization of a county society. Drs. Andrew W. Morton, Curtis G. Kenyon and Philip M. Jones, San Francisco, trustees of the Medical Society of the State of California, were present. Dr. Elizabeth M. Yates, Santa Rosa, was made temporary chairman, and Dr. Melville M. Shearer, Santa Rosa, temporary secretary. The standard constitution and by-laws was read, discussed and adopted, and permanent organization effected by the election of the following officers: Dr. Melville M. Shearer, president; Dr. James W. Jesse, vice-president; Dr. George W. Mallory, secretary, and Dr. Anabel McG. Stuart, treasurer, all of Santa Rosa.

Florida.

BREVARD COUNTY MEDICAL SOCIETY.—This society has been organized at Titusville with the following officers: Dr. Benjamin R. Wilson, Titusville, president; Dr. George W. Holmes, Sharpes, vice-president; Dr. William L. Hughlett, Cocoa, secretary and treasurer, and Drs. Leon A. Peek, Melbourne, Clyde P. Platts, Fort Pierce, and Edward E. Rollins, Titusville, censors.

Illinois.

CLARK COUNTY MEDICAL SOCIETY.—At the second quarterly meeting held in Marshall, October 8, a new constitution and by-laws was read and adopted.

LOGAN COUNTY MEDICAL SOCIETY.—This society met at Lincoln, October 29, adopted the standard constitution and by-laws and elected the following officers: Dr. James L. Lowrie, Lincoln, president; Drs. Louis F. Curtis, Elkhart, and Maskell Lee, Atlanta, vice-presidents; Dr. Harry S. Oyler, Lincoln, secretary, and Dr. William H. Kirby, Chestnut, treasurer.

Indiana.

GRANT COUNTY MEDICAL SOCIETY.—At the meeting held in Marion, October 27, the society adopted the standard constitution and by-laws. The increase in membership has been marked, especially among the younger physicians in the county.

Iowa.

GRUNDY COUNTY MEDICAL SOCIETY.—At its meeting held in Grundy Center, October 27, the society reorganized and adopted a new constitution and by-laws.

MUSCATINE COUNTY MEDICAL SOCIETY.—The full quota of officers of this society, whose reorganization was noticed in THE JOURNAL of October 24, is as follows: President, Dr. Henry M. Dean, Muscatine; vice-president, Dr. Calvin W. Smith, Muscatine; secretary-treasurer, Dr. Thomas F. Beveridge, Muscatine, and censors, Drs. George O. Morgridge, Muscatine, Alexander R. Leith, Wilton, and Channing B. Kimball, West Liberty. The next meeting will be held jointly with the Southeastern Iowa District Medical Association, at Muscatine, November 19.

Louisiana.

VERMILION PARISH MEDICAL SOCIETY.—The physicians of the parish met in Abbeville, October 17, and organized a society on the standard plan with 10 members, and the following officers: Dr. Milton R. Cushman, Abbeville, president; Dr. Joseph T. Abshire, Leroy, vice-president; Dr. Clarence J. Edwards, Abbeville, secretary, and Dr. H. B. White, Gueydan, treasurer.

ST. TAMMANY PARISH MEDICAL SOCIETY.—Physicians of the parish met in Covington, October 20, and organized a society on the standard plan, with the following officers: Dr. Ruffin B. Paine, Mandeville, president; Dr. James F. Pigott, Covington, vice-president, and Dr. H. D. Bulloch, Covington, secretary and treasurer. The society started with a charter membership of 11.

ST. JAMES PARISH MEDICAL SOCIETY.—Dr. Andrew G. Friederichs, New Orleans, councilor for the Second District, and Dr. Louis G. Le Beuf, New Orleans, met with the physicians of the parish at Convent, October 31, and aided in the organization of this society, which has an initial membership of 12. The following officers were elected: Dr. Pierre C. Tircuit, Oubre, president, and Dr. J. F. Buquoi, secretary.

TERREBONNE PARISH MEDICAL SOCIETY.—Dr. John M. Barrier, Delhi, president of the Louisiana State Medical Society, met the physicians of the parish at Houma, October 23, and participated in the organization of a parish society with an initial charter membership of 10. The following officers were elected: Dr. Robert E. McBride, Houma, president; Dr. Adolphe Delcourt, Houma, vice-president; Dr. Adolphe Delcourt, Jr., Houma, secretary, and Dr. Adolphe Tircuit, Little Caillou, treasurer.

IBERIA PARISH MEDICAL SOCIETY.—Dr. John M. Barrier, Delhi, president of the Louisiana State Medical Society, met the physicians of the parish at New Iberia, October 27, and helped them to organize a medical society with the following officers: President, Dr. George J. Sabathier, New Iberia; vice-president, Dr. George P. Minvielle, Jeanerette; secretary and treasurer, Dr. J. Wofford Saunders, New Iberia, and committee on scientific work, Drs. J. Wofford Saunders, New Iberia, Phares A. Bogkin, Jeanerette, and George P. Minveille, Jeanerette.

Minnesota.

MILLE LACS, ISANTI AND KANABEC COUNTY MEDICAL SOCIETY.—This society has been organized at Princeton with the following officers: President, Dr. Henry C. Cooney, Princeton; vice-president, Dr. Henry P. Bacon, Milaca; secretary, Dr. Theo. L. F. Armitage, Princeton; treasurer, Dr. G. Ross Caley, Princeton, and censors, Drs. Jacob F. Whiting, Spencer Brook, Robert B. Hixson, Cambridge, and George W. Nichols, Milaca.

Missouri.

MORGAN COUNTY MEDICAL SOCIETY.—This society, auxiliary to the Medical Association of the State of Missouri, was organized at Versailles, October 29, with the following officers: Dr. Joel D. Hubbard, president; Dr. John T. Beale, secretary, and Dr. Robert Q. Kelly, delegate to the state association, all of Versailles.

North Carolina.

SCOTLAND COUNTY MEDICAL SOCIETY.—Dr. Jacob F. Highsmith, Fayetteville, councilor for the Fifth District, met with the physicians of the county at Laurinburg, October 19, and organized a county society with the following officers: President, Dr. Daniel M. Prince, Laurinburg; vice-president, Dr. William T. Pate, Gibson; secretary and treasurer, Dr. Alfred W. Hamer, Laurinburg, and censors, Drs. Peter John, Laurinburg, William G. Shaw, Fontcol, and George M. Pate, Gibson.

Society Proceedings.

COMING MEETINGS.

Southern Surgical and Gynecological Association, Birmingham, Ala., Dec. 15.
Western Surgical and Gynecological Association, Denver, Dec. 28-29.

AMERICAN PUBLIC HEALTH ASSOCIATION.

Proceedings of the Thirty-first Annual Meeting, held at Washington, D. C., Oct. 26 to 30, 1903.

(Continued from page 1158.)

Report of the Committee on Animal Diseases and Food.

DR. D. E. SALMON, Washington, D. C., chairman, presented this report, which will be published in full in THE JOURNAL. The committee concluded that it would require much work to decide with even approximate accuracy the proportion of human tuberculosis caused by animal infec-

tion; but the fact that 25 per cent. of the cases in children investigated by the German commission, and 50 per cent. of similar cases investigated by de Schweinitz showed that they were caused by animal infection was sufficient to convince the committee that measures should be taken and enforced at once to guard against infection from this source.

DISCUSSION.

DR. GEORGE M. STERNBERG called attention to the facts that pathogenic bacteria vary greatly in virulency, that attenuated varieties may be produced, motile bacilli lose their motility, etc.

DR. GARDNER T. SWARTS, Providence, R. I., mentioned the shaking of the hide of the cow as a means of transmission of tuberculosis through milk, in addition to shaking the udder during the milking process.

DR. JOHN GUITERAS, Havana, Cuba, said the results in Cuba tended to show the transmission of tuberculosis through milk was not as frequent as was generally supposed. No milk was used in Cuba that was not boiled, and yet he believed infantile tuberculosis was as frequent in Cuba as elsewhere.

DR. J. M. LINDSAY, Havana, Cuba, did not believe consumption, strictly speaking, was a contagious, infectious or hereditary disease. He said it was a product of wrong living. This wrong living might be from taking milk from tuberculous cows, or from living in a tuberculous house.

DR. D. E. SALMON, Washington, D. C., said that while Cuba sterilized its milk more than America did, yet it might also be the case that if Cuba did not sterilize its milk it would have more tuberculosis than it did at present.

Report of the Committee on the Causes and Prevention of Infant Mortality.

DR. HENRY MITCHELL, Asbury Park, N. J., chairman, in this report, said that among the most promising measures for a further reduction of infant mortality, the committee directed attention to the following: 1. To secure a more general adoption of cleanly methods of the collection, cooling and handling of cow's milk. It was not enough to destroy bacteria which had been permitted to gain entrance into the milk, or while pathogenic bacteria might be rendered innocuous, the toxins already formed were not affected by high temperature, hence no manipulation of the milk could be safely substituted for cleanliness in its collection and distribution. 2. To abolish breeding-places for flies in dwellings and to exclude them from contact with food. 3. To encourage the erection of improved tenements in cities and to show the dwellers in crowded districts the advantage of residence in the suburbs. 4. To more effectually isolate all cases of the dangerous communicable diseases.

Preparation of Vaccine Virus.

DR. JOHN F. ANDERSON, Washington, D. C., said experimental work had shown that the germicidal action of glycerin was feeble; other substances have been tried, and of these, chloroform seemed the most valuable. By it, the extraneous bacteria are removed in from a few hours to seven days; glycerin requires four weeks for full effect. Chloroform does not harm the vaccine potency. Chloroform, being extremely volatile, could be allowed to evaporate from the vaccine under aseptic precautions after being allowed to act as long as desired. It would be especially useful in hot countries where the active agent in vaccine does not retain its potency long, or when, as in epidemics, sudden calls were made for large quantities of virus.

Report of the Committee on the Disposal of Refuse Materials.

MR. RUDOLPH HERING, New York City, read this report, pointing out that each municipality should select the most economical method in construction and maintenance, as determined by a study of its own special conditions, and by using the deductions of the large experience with such problems both in Europe and at home.

Report of the Committee on the Etiology of Yellow Fever.

DR. JOHN W. ROSS, U. S. N., Washington, D. C., read this report. Baggage and bedding were admitted to Havana freely, and no cases were caused thereby. The conclusions previously reached were supported by experience since.

Report of the Committee on the Canteen in Armies.

DR. GEORGE M. KOBER, chairman, Washington, D. C., read this report. Reference was made to the introduction of the canteen system, and after dwelling at great length on the increase of drunkenness, the increase of trials by summary or other courts for drunkenness and for offenses caused by drunkenness, increase of desertions, increase in absence without leave, effects of the abolition of the sale of beer at the posts on the morality and discipline of the command, the committee presented the following recommendations:

THE RARE NECESSITY FOR ALCOHOL.

1. Your committee is aware of the fact that beverages containing alcohol are an accessory food of value only when it becomes necessary to increase temporarily the elasticity of mind and body and a desire and capacity for work, and that the subsequent depressing effects and the baneful influence of its misuse requires great care in its employment, especially when rest, proper food and some of the alkaloidal beverages, like coffee, tea, cocoa, and stimulants, like meat broths and soup, may accomplish the same purpose, and their sale as a substitute should be encouraged.

CHOOSE THE LESSER EVIL.

2. In spite of the fact that beer drinking, viewed in the abstract, is unproductive of good, your committee believes that its sale in canteens, under rational and comprehensive regulations, rather than its total prohibition, will subserve the best interest of scientific temperance, because so long as human nature is weak and the masses are not properly educated, the substitution of a lesser evil under military control appears not only justifiable but will in the future, as it has in the past, prevent excesses which are fatal to the soldier, soul and body. At present every effort toward total abstinence at military posts merely opposes theory to facts and sentiment to statistics, and compels recourse to saloons of the lowest character, whose proprietors care nothing for the efficiency of the army or the ruin of a good soldier.

A SOCIAL CLUB—NOT A SALOON.

3. Every precaution should be observed to conduct post exchanges and the sale of light wine and beer along the lines recommended by Munson in his "Theory and Practice of Military Hygiene," pp. 820-822, and your committee begs to emphasize the fact that the bar features should be entirely abolished and that the exchange should, in fact, be a soldiers' club, with ample facilities for reading rooms, legitimate amusements and athletic sports, where the soldier as a self-respecting individual may satisfy in an orderly manner his craving for diversion from the routine duties of a military life, without undue prominence of the refreshment feature.

SUBSTITUTES FOR ALCOHOLICS.

4. The sale of soft drinks, warm lunches, coffee, tea, cocoa, bouillon and soups should be encouraged as substitutes for alcoholic beverages, and medicinal and line officers should be directed to educate, by precept and example, the rank and file of the army; that, for persons in health, alcohol in any form presents no advantages not found in other foodstuffs or stimulants and which are, moreover, free from the dangers attending its use. In this connection it should be remembered that good food, well prepared and properly cooked and served, is one of the most effective prophylactic measures against the "drink habit" in civil as well as military life, and no effort should be spared to bring the culinary department in the army to the highest state of perfection.

VENEREAL PROPHYLAXIS.

5. Medical officers should point out the grave and far-reaching consequences of the effect of venereal diseases, so intimately connected with the drink habit, and make a strong plea in favor of continence. This may be done by letting these young men know that while the sexual passion is very strong it can be accelerated or delayed, excited or lowered by the influence of the will. The soldier can be assured that by the cultivation of pure thoughts, removal of temptation, normal mental and, especially, by vigorous physical exercise, continence is not only possible but easy.

OFFICERS SHOULD TAKE A PERSONAL INTEREST IN THEIR MEN.

6. Strong effort should be made to improve the social conditions of the soldiers. There are times and occasions when the friendly advice of a company commander or attending surgeon, showing a personal interest in the physical and moral welfare of the young soldier, will prove a greater benefit than the cold verdict of a summary court martial. Such personal efforts on the part of the officers, dictated by the spirit of a universal brotherhood of man, appears to us perfectly compatible with proper military discipline. It is also believed that the habit of making savings deposits with the army paymasters may be greatly stimulated by personal efforts.

RESOLUTIONS ADOPTED.

The committee recommended the presentation to the Senate and House of Representatives in Congress the following resolutions, which were adopted by the association:

Resolved, That this body deplores the action of Congress in curtailing the authorization of the army canteen or post exchange and, in the interests of general and military sanitation, recommends its establishment on its former basis at the earliest possible date.

Resolved, That this body, in the interest of temperance and humanity, cordially invites the intelligent co-operation of a very large element of good citizens, who have been active in securing legislation against the sales in the military service of alcoholics of any character, in taking successive steps toward the betterment of existing conditions, and thus assist in controlling and largely curtailing an evil which it is powerless at present to prevent.

Human and Bovine Tuberculosis.

DR. M. P. RAVENEL, Philadelphia, discussed the researches made on this subject. He felt that the genetic unity of the human and bovine races of tubercle bacilli, as well as their intertransmissibility, had been definitely demonstrated. It had also been proven that a certain proportion of persons, chiefly young children, met their death through infection with the bovine tubercle bacillus, but the knowledge at hand did not enable him at present to define the extent of this danger.

(To be continued.)

NEW YORK STATE MEDICAL ASSOCIATION.

Twentieth Annual Meeting, held in New York City, Oct. 19-22, 1903.

(Concluded from page 1159.)

Properties of the Blood Serum as Illuminated by Ehrlich's Researches.

DR. RICHARD C. CABOT, Boston, gave a most interesting talk on this subject, with the object of popularizing it among physicians. He characterized it as the most important single medical discovery that had been made since the publication of Virchow's cellular doctrine. After explaining, in a most delightful manner Ehrlich's side-chain theory, he went into the subject of hemolysis, with its medical and medicolegal aspects.

Diphtheria in the Country; Its Diagnosis and Management.

DR. J. R. STURTEVANT, Theresa, described cases from which he reasoned that the admission of chickens to the dwelling house and the open cesspool near the door were not uncommon sources of diphtheria. He believed it was the duty of every country practitioner to always keep diphtheria antitoxin at hand, and, according to his own experience, doses of 1,500 units were ordinarily sufficient.

DISCUSSION.

DR. J. ORLEY STRANAHAN, Rome, said that he had found it necessary and desirable to use large doses; in one case he had given 3,000 units every six hours for five doses before there was any improvement.

DR. DELANCEY ROCHESTER, Buffalo, said that an extensive hospital experience with diphtheria had taught him to use antitoxin freely. His initial dose was 4,000 units at least, and he had given during the first year of life as high as 5,000 units, sometimes repeating this dose in three hours.

Some Features of the Epileptic Attack.

DR. B. ONUF, Sonyea, called attention to the fact that the epileptic cry was not shrill, but was a low tremulous moan. The positions of the limbs varied in different attacks or even in the same attack, but the point to be noted was the asymmetry of these postures. It was not always easy to determine whether or not any consciousness remained, but there might be some recollection of the attack, or if pricked with a pin during the seizure, the way in which the limb was placed out of the way of the irritation might show some cerebral activity to be present.

Prostatectomy.

DR. PARKER SYMS, New York, reported 25 cases and showed the specimens. There was one death, which occurred after 23 operations had been done. There were practically 20 cures. The principal danger was from the anesthetic.

DISCUSSION.

DR. GOODFELLOW, San Francisco, said that he had done about 90 prostatectomies. He makes use of the old median lithotomy operation, and, in the past two years, in order to avoid the dangers of ordinary general anesthesia, he has employed spinal cocainization. He rarely had much hemorrhage with these perineal operations, and since he had, as far as possible, avoided instrumentation, both before and after operation, epididymitis had been a very rare complication.

DR. HENRY ROTH, New York, said that he had seen most of Dr. Syms' cases, and had been impressed with the fact that the mortality was only 4 per cent., whereas the earlier prostatectomies of a few years ago had a mortality of 30 or 40 per cent. The general condition rather than the patient's age should be considered when deciding on operation.

Knowledge of the Eye That is of Use to the General Practitioner.

DR. S. BUSBY ALLEN, New York, read this paper. He said that every practitioner should be on the alert for acute glaucoma because he could easily detect it by merely noting the tension of the eye, and because a failure to recognize the true condition at once led to such serious consequences. In about 30 per cent. of cases of tabes progressive loss of vision, diplopia and possibly ptosis precede the other symptoms. The onset and steady increase of presbyopia at an unusually early age should suggest diabetes. Cataract is also not uncommon in diabetes. Inequality of the pupils should always lead to a searching examination.

The Early Diagnosis of Tuberculosis.

DR. JAMES J. WALSH, New York, was the author of this paper. He pointed out that a rapid pulse was often persistently present for a considerable time before the toxin of tuberculosis exerted any perceptible influence on the body temperature. And yet slight temperature variations were among the early signs. The temperature should be taken at 8 a. m., 12 m. and 6 p. m., and if there is a daily variation of a degree and a half it is probable that some infection is present. In some healthy individuals a morning temperature of 98.5 F. would point to a slight elevation of the temperature. There was often extensive consolidation of the lungs, and sometimes even secondary infection before tubercle bacilli appeared in the sputum. The posterior portion of the apex was the first part usually affected.

DISCUSSION.

DR. DELANCEY ROCHESTER mentioned a case in which there was not as much as one degree of daily variation in temperature, so far as could be learned from taking the temperature three times a day, but when he had it taken every two hours from 6 a. m. to 10 p. m. it was discovered that the highest temperature was between 8 and 10 p. m., instead of between 2 and 6 p. m., and that the total daily variation was 2.5 F. He had found a change in the pitch on percussion to be of value at a time when the other physical signs were negative. The physical signs of incipient tuberculosis were often obtained at the clavicle, above the scapula and in the upper part of the scapular region. The tuberculin test is an important confirmatory test.

DR. S. A. KNOPF, New York, said that early pulmonary consolidation could often be detected best by placing the hand over the lung and telling the patient to take a deep breath and then make a humming sound. This would produce a perceptible fremitus. He had known reaction to the tuberculin test in chlorotic girls, as well as in actinomycosis and syphilis; moreover, it sometimes causes a generalization of the disease; hence it is both unreliable and dangerous.

Treatment of Septic Affections by the Intravenous Injections of Collargol.

DR. GEORGE TUCKER HARRISON, New York, recommended injection of a 5 per cent. solution into the vein under aseptic precautions; he had never found it necessary to use more than 7 injections in any one case. He felt that this treatment was a therapeutic resource of the highest order.

Acute Cholecystitis.

DR. J. H. MUSSER, Philadelphia, believed cholecystitis to be a very common disease and one bearing some resemblance to appendicitis. Pain in the epigastrium, or radiating to the right shoulder, was present in 95 per cent. of the cases. Forty per cent. of all types of cholecystitis die if not operated on, whereas only 5 per cent. die if subjected to operation during the course of the disease.

DISCUSSION.

DR. ROBERT T. MORRIS, New York, mentioned a case in which, although there had been no prodromal symptoms immediately following an operation for acute empyema of the gall bladder, the patient passed through a typical typhoid. He believed acute pancreatitis to be a most dangerous complication, this alone affording an excellent reason for operating.

DR. ALEXANDER LAMBERT said he had found it at times wellnigh impossible to differentiate between appendicitis and chole-

cystitis. Some assistance was derived from noting the effect of pressing over the appendix and over the gall bladder.

The Surgical Treatment of Salpingitis.

Dr. Henry C. Coe, New York, said that the propriety of the operation of vaginal incision and drainage in pyosalpinx is now generally recognized. Even the simplest cases of pelvic abscess should be prepared for an abdominal section before any attempt is made to evacuate them. The practical difficulty in all conservative operations on the tubes was to distinguish between healthy and diseased tissues. When doing the radical operation, it was better to excise the tube and suture the uterine cornu than to leave a stump of tube.

The Non-Operative Treatment of Salpingitis.

Dr. W. Travis Gibb, New York, said that in acute catarrhal salpingitis the treatment should be largely expectant, and the use of antipyretics should be avoided, because pain and fever were depended on by the physician to show him the course of the disease. Curettage and intra-uterine applications should be avoided during the acute stage. As a symptomatic cure can be effected in many cases of chronic salpingitis by non-operative treatment, this method should be given a fair trial. Opiates and stimulants should be avoided and everything done to improve the general health. In addition large hot saline douches should be taken, and the vagina should be tamponed with cylinders of lamb's wool moistened with ichthyol.

DISCUSSION.

Dr. W. M. Polk spoke in favor of incision through the posterior cul-de-sac in cases of severe pelvic inflammation.

Dr. C. Bonifield, Cincinnati, said that he had found veratrum viride, given usually in doses of 8 to 15 minims every eight to twelve hours, a most useful means of limiting pelvic inflammation, and at the same time favoring elimination of septic matter by stimulating the skin, kidneys and liver.

Clinical Aspects of Ileocolitis in Children.

Dr. Thomas M. Rotch, Boston, said that ileocolitis was usually secondary to fermental diarrhea or to the acute infectious diseases, especially measles. The characteristic symptoms were persistent fever, frequent, small stools containing blood, mucus, pus and shreds of membrane, tenesmus and more or less abdominal tenderness. Of 61 cases of diarrhea in which bacteriologic examinations were made last summer, the *Bacillus pyocyaneus* was present as the apparent cause in 2, the *Streptococcus pyogenes* in 1, and the Shiga bacillus in 10 cases. In the remaining 48 the sugar-fermenting organisms were found. The Shiga bacillus was not always the cause in cases having slightly bloody stools.

Dr. Albert H. Ely, Southampton, reported several cases of colon bacillus infection of the female genito-urinary tract.

DISCUSSION.

Dr. William H. Park said that the more ileocolitis resembled severe dysentery, the greater the probability of finding the dysentery bacillus in the stools.

Dr. L. Emmett Holt, New York, said that all kinds of lesion had been found associated with the Shiga infection. Such infection was commonly denoted by sudden onset, high temperature and stools of blood and mucus. In these cases it seemed probable that the serum treatment would prove of service.

Dr. R. G. Freeman, New York, said that in most of the 44 cases in which he had found the Shiga bacillus there were stools of blood and mucus. The stools and the persistence of the disease were the most characteristic features. The mortality was a trifle higher in the cases that did not receive the serum treatment, but the difference was slight. It was probable that the dosage had been inadequate.

Other papers were read as follows:

"Arteriosclerosis and Its Bearing on Certain Lesions of the Retina and Optic Nerves," by Dr. Charles Stedman Bull, New York. "The Influence of Oxygen Taken by Full Normal Respiration, When Chemically Pure, as a Means of Sustaining and Increasing Mental, Nervous and Physical Energy," by Dr. Cordelia A. Greene, Castile. "Peculiar Symptoms Following a Radical Operation on the Ear," by Dr. George F. Cott, Buffalo. "Radium in Medicine," by Dr. Samuel G. Tracy, New York. "The Etiology and Pathology of Salpingitis," by Dr. Edward J. Ill, Newark, N. J. "Removal of Superior Maxilla for Phosphorus Necrosis," by Dr. David P. Austin, New York. "The Typhoid Epidemic in Ithaca, with Special Reference to Causation, Prevention and Treatment," by Dr. Chauncey P. Biggs, Ithaca. "Treatment of Compound Fractures," by Dr. V. D. Bozovsky, Dunkirk. "Minus Cylinders; Those Who Prescribe Them and Those Who Wear Them," by Dr. Frank W. Higgins, Cortland.

Therapeutics.

[It is the aim of this department to aid the general practitioner by giving practical prescriptions and, in brief, methods of treatment for the diseases seen especially in every-day practice. Proper inquiries concerning general formulae and outlines of treatment are answered in these columns without allusion to inquirer.]

Zinc Sulphocarbolate in Cholera Infantum.

Dr. W. F. Waugh, in an abstract in *Med. Rev. of Reviews*, lauds the use of zinc sulphocarbolate in the treatment of summer complaint, enterocolitis and cholera infantum. The bowels should be thoroughly cleared out with castor oil, calomel, mercury and chalk, aromatic rhubarb, lavage or colonic flushing as seems best in the individual case.

For lavage he recommends a solution containing one grain of zinc sulphocarbolate to the ounce. The same solution may be used for colonic flushing.

When the type is dysenteric, silver nitrate, grains 2 (.12) to the pint (480.) of water should be used for rectal flushing and should be given as hot as can be borne. This should be followed with the zinc salt internally, grains ½ (.03) to two (.12) every hour to children in the second summer. It should be given in powder form combined with bismuth and pepsin. Where there is extreme acidity of the stools marked by excoriation of the rectal mucosa, sodium sulphocarbolate is preferable or the triple salts zinc, sodium and calcium.

Atropin may be of service in relieving the gastric irritability. The best diet, according to the author, is the raw white of egg in ice water, coffee, rice-water, barley water, toast water, followed by meat soups and fruit juices. The fresh juice of lean beef can be given in five (.30) to ten (.65) drop doses every hour, and in extremely debilitated individuals it should be dropped on the tongue and allowed to trickle down the esophagus.

Hot, cold or salt baths are always indicated.

Chronic Otorrhea.

The following combination is recommended by *Merck's Archives* in the treatment of chronic otorrhea:

℞.	Ichthyol	|
	Glycerini	|
	Aq. destil., āā.....3ii	8|

M. Sig.: After thoroughly syringing out the ear with warm chamomile tea, allow four to eight drops to run into the ear and repeat this treatment once a day.

The treatment of chronic nicotinism involves hygienic and medicinal measures, according to J. V. Shoemaker, in *Med. Standard*. The victim should abandon the use of tobacco. If he can not do this, he should at least diminish his smoking or chewing. His food should be plain, well prepared, nutritious and digestible. Tonics and digestants are usually required. The following combination is of service:

℞.	Zinci valerianatis .....gr. ii	|12
	Zinci phosphidi .....gr. ⅛	|008
	Pulv. cannabis ind. .....gr. ¼	|015

M. Ft. capsula No. i. Sig.: One such every four hours.

The salts of zinc counteract the nervous prostration and the cannabis indica allays the morbid imagination, which sometimes continues for a considerable length of time after the use of tobacco has been stopped.

Erysipelas.

The constitutional treatment of erysipelas, according to Hyde, should be directed to lowering the temperature, to obtaining the proper functional activity of all the organs of the body and to sustaining the strength of the patient. The purpose of local treatment is to limit the extension of the disease. Collodion, iodin, carbolic acid, alcohol, solutions of tannin and nitrate of silver are among the various remedies

recommended as local treatment for this infection. The following combinations have been employed with success:

℞. Sodii hyposulphitis 3iii 12
Aquæ .....℥iii 90
M. Sig.: Apply locally on gauze; or:

℞. Acidi carbol. 3ii 8
Alcoholis .....℥iss 45
M. Sig.: Apply locally.

The following combinations are remedies which have been used successfully by experienced physicians, as noted by Cheron in a former issue of *Ther. Gaz.:*

℞. Creolin 3i 4
Iodoformi 3iv 15
Lanolini 3x 40
M. Sig.: Thoroughly spread over the affected area and cover with gutta percha; or:

℞. Creolin 3i 4
Cretæ prep.
Adipis, āā .....℥ss 15
Olei menth. pip. .....gtt. iii 20
M. Sig.: Apply locally.

The foregoing serves to produce a cooling effect to the inflamed parts.

Ichthyol may be used as a local antiseptic in the following combination:

℞. Ichthyol
Spts. etheris, āā.....3v 20
Collodii (flexible) 3x 40
M. Sig.: Apply locally.

Internally the administration of quinin is of value to check the progress of the disease and to reduce the temperature. Iron may be given internally in the form of the tincture in large doses frequently repeated and well diluted in water. Locally it may be applied as follows:

℞. Ferri sulphatis 3i 4
Lig. petrolati .....℥i 30
M. Sig.: Apply locally.

The sodium preparations, applied on compresses, may be combined as follows:

℞. Sodii salicylatis 3ii 8
Sodii bicarb. 3i 4
Aq. bullientis .....Oi 480
M. Sig.: Apply on compresses.

The tincture of benzoin has frequently been used in the following combination:

℞. Tinct. benzoini comp.
Glycerini
Collodii (flex.), āā.....3ii 8
M. Sig.: To be painted over the affected area once or twice daily.

Internally the following combination containing ammonium is recommended:

℞. Ammon. carb. 3ii 8
Solutionis ammon. acetatis .....℥iii 90
Ext. glycyrrhizæ flu. .....℥i 30
M. Sig.: Two teaspoonfuls every three hours in water.

Delirium Tremens.

The treatment of delirium tremens, according to J. R. Clemens, in *N. Y. and Phila. Med. Jour.*, consists in prophylaxis and the treatment of the attack. The abortive treatment should be directed toward proper elimination by the bowels, moral suasion and feedings of milk and beef juice every two hours, with some sedative such as sulphonal or paraldehyde. An attack may develop a lobar pneumonia, causing one to consider the question as to the advisability of administering alcohol in delirium tremens. Alcoholics, as a rule, do not eat a sufficient amount of nourishing food, therefore food, according to the author, is the chief indication in the treatment. And, if the patient is well along in years or the attack is severe, he recommends the administration of whisky or brandy first as a bribe to get the patient to take food, and, secondly, as a stimulant to the heart, which will also combat the insomnia which is so constant. In young subjects both narcotics and alcoholic stimulants are contraindicated. The general treatment, as outlined by the author, is as follows:

FOOD.

Milk, raw or peptonized, every two hours, alternating with beef juice.

MEDICINAL TREATMENT.

A dose of the mild chlorid of mercury at the onset, followed by a saline. A bitter tonic containing strychnia as the chief ingredient should then be given, and if the heart sounds become weak the strychnia should be given hypodermically. In treating the stubborn insomnia, the room should be dark, cool and quiet. To promote sleep hyoscin hydrobromate in doses of gr. 1/200 (.0003) to gr. 1/100 (.0006) should be given hypodermically or it may be substituted by sulphonal or paraldehyde. He condemns the use of opium or chloral because of the condition of the heart and kidneys. The patient should be constantly observed because of the tendency to suicide. Moral suasion should be used to keep the patient in bed, and, if necessary, a draw sheet should be passed across the bed over the patient and tied to the bed railing. The treatment of the delirium should be secondary to the heart and lungs.

Dr. George S. Weever, in the same periodical, recommends the following preparations either separately or combined in the treatment of the insomnia: Ammonium bromid dram 1 (4.00); morphin sulphatis grain ¼ (.015); chloral hydrate grains ten (.65) to grains fifteen (1.00). He prefers the ammonium preparation along with cold douches and packs to relieve the delirium. After the patient has recovered from the delirium the following combination is recommended:

℞. Quin. sulph.
Pulv. capsici, āā..... gr. ii 12
Ext. nucis vom. .....gr. ¼ 015
M. Ft. cap. No. i. Sig.: One every four hours.

If the stomach is irritable, as is usually the case, H. K. Glidden recommends the following:

℞. Bismuthi subnit.
Cerii oxalatis, āā.....3i 4
Sodii bicarb. .....gr. xxiv 1 65
M. Ft. chartulæ No. xii. Sig.: One powder every four hours.

Medicolegal.

SOME LEGISLATION OF THE YEAR 1903.

Illinois—Restricts Sale and Prescribing of Cocain.—What is to be known as Section 14a of the act to regulate the practice of pharmacy in Illinois is added by an act in the laws of 1903. It provides that it shall not be lawful for any druggist or other person to retail or sell or give away any cocain hydrochlorate, or any salts of or any compound of cocain, or any preparation containing cocain, or any salts of or any compound thereof, except on the written prescription of a licensed physician or dentist, which prescription shall only be filled once, and must have written plainly on it the name and address of the patient. This section shall not apply to sales at wholesale by any manufacturer or wholesale dealer, who shall sell original packages only. Each container must be labeled with a label specifically setting forth the proportion of cocain contained therein. What is to be known as Section 14b, provides that any druggist or other person who shall retail or sell any cocain, etc., in violation of this act, and any druggist or other person who shall prescribe any cocain, etc., to any person addicted to the habitual use of cocain, etc., in any form, shall, for the first offense, be fined from $50 to $200, and for each subsequent offense from $200 to $1,000, and if the person so offending shall have a license as a physician, dentist or pharmacist, such license shall be revoked. (The words "knowingly prescribes" do not appear. The physician apparently has no escape in case he fails to recognize a patient as a cocain user.)

Illinois—Must Report Deaths as Well as Births—Fees.—The Illinois act of 1903, referred to on page 971 of THE JOURNAL, Oct. 17, 1903, as requiring reports of births, also provides that it shall be the duty of every physician and midwife practicing in the state to report in writing, to the State Board of

Health at Springfield, the death of any of his or her patients within thirty days after said death: Provided, That in the case of deaths which occur within the corporate jurisdiction of cities, the ordinance of which requires that the burial or removal permit shall be issued before the burial or removal of the body, and that before such permit shall be issued a report or certificate of death shall be presented to the official by whom the permit shall be issued, no report need be made to the State Board of Health by the physician or midwife. All reports of deaths shall be made in the manner directed by the State Board of Health on its blank forms. Every physician, midwife or coroner who shall make a report of death to the State Board of Health in the manner provided for shall be paid for each report the sum of 25 cents. The fees for reporting births or deaths are made a charge on the county in which they accrue, and the county clerk of the respective counties shall, on the request of any person entitled to said fees in his county, issue to such person his warrant on the county treasurer of said county for the amount of fees due such person under this act, and the county treasurer of said county shall pay the same on presentation out of any money belonging to the county not otherwise appropriated: Provided, That no payment shall be made under the sections providing for payment for reporting births and deaths where the period of gestation is less than seven months.

Maine—Prohibits Spitting on Floors of Street Cars.—Chapter 139 of the Public Laws of Maine of 1903 provides that whoever spits on the floor of any street car shall be fined not less than $2 nor more than $10.

Maine—Provides for State Laboratory of Hygiene.—Chapter 223 of the Public Laws of Maine of 1903 confers on the State Board of Health authority to establish and equip with proper and necessary apparatus, instruments and supplies a state laboratory of hygiene for the chemical and bacteriologic examination of water supplies, milk and food products, and the examination of cases and suspected cases of diphtheria, typhoid fever, tuberculosis, glanders and other infectious and contagious diseases. The State Board of Health shall appoint a director of such laboratory, who shall hold that position at the pleasure of the board. He shall keep a record of all specimens sent to him for examination, and examine these specimens without unnecessary delay, and do such other work and make such other investigations relating to the public health as the board may from time to time instruct him to do. The services of the laboratory and all investigations therein made shall be free to the people of the state.

Massachusetts—Practice of Dentistry by Physician.—Chapter 219 of the Acts of Massachusetts of 1903, entitled "An act relative to the practice of dentistry," amends Section 29 of Chapter 76 of the revised laws so that it reads: The provisions of Sections 24 to 28, inclusive, shall not apply to a physician registered under the provisions of this chapter "and in actual practice as a physician, in cases where he deems immediate treatment necessary for the relief of his patients," etc., the amendment consisting of the insertion of the words inclosed in quotation marks.

Massachusetts—Forbids Furnishing Liquor at Hospitals.—Chapter 410 of the Acts of Massachusetts of 1903 provides that whoever gives, sells or delivers spirituous or intoxicating liquor to a patient of the Massachusetts Hospital for dipsomaniacs and inebriates, or of any of the state hospitals for the insane, or to a patient under the control of any of said hospitals, except under the direction of a physician of the hospital, and whoever has in his possession within the precincts of any of said hospitals, any such liquor, with intent to convey or deliver it to any patient thereof, except under direction as aforesaid, shall be punished by a fine of not more than $50 or by imprisonment for not more than two months.

Michigan—Prohibits Exhibitions of the Deformed, Etc.—No. 103 of the Public Acts of Michigan of 1903 provides, under penalty, that it shall be unlawful for any physician or other person to expose or keep on exhibition any human monstrosity, or any diseased or deformed human bodies, or parts or representation thereof, which would be indecent in the case of a living person, except as used for scientific purposes before members of the medical profession or medical classes.

Michigan—Provision for Prevention of Rabies.—No. 116 of the Public Acts of Michigan of 1903 provides that whenever it shall be proved to the satisfaction of the local board of health that any indigent person within its jurisdiction has been bitten by a rabid dog, or other rabid animal, or in any other manner has been infected with the virus of rabies, said board shall make the necessary arrangements and send said person to the Pasteur Institute at the University of Michigan. The necessary expenses thus incurred shall be a charge on the township, city or incorporated village in which the expense was authorized. Before their payment or allowance all bills for such expenses shall be audited by the local board of health.

Wisconsin—Maternity Home and Baby-Farm Regulations.—Chapter 161 of the Laws of Wisconsin of 1903 provides that any person or corporation who own, conduct or manage any institution for the boarding or sheltering of infant children, or any so-called maternity home or lying-in hospital or so-called "baby farm" shall, before taking any inmate, report in writing to the local board of health, health officer or health department, the name and address of such person or corporation and the exact location of the institution. The local health officer or health commissioner, or his assistants, shall, at reasonable hours, be admitted to inspect the institution. Births, including those of stillborn or prematurely born children, taking place in such maternity home shall be reported to the local board of health or health officer or department within twenty-four hours and before the child is removed from the institution. Likewise, the arrival of any child at a home for infants shall be reported, giving name, sex, age, color and from whom received. The removal of any child shall also be reported. And it shall be the duty of the local board of health, health officer or department to keep informed of the nature and reputation of every such institution in their respective jurisdiction, and to visit and inspect the same from time to time.

Current Medical Literature.

AMERICAN.

Titles marked with an asterisk (*) are abstracted below.

American Medicine, Philadelphia.

October 31.

1 *The Dietetic Treatment of Chronic Nephritis. J. M. Anders.
2 *The Technic of McGraw's Method of Gastroenterostomy. Samuel Lloyd.
3 Successful Intraneural Infiltration of the Median and Ulnar Nerves During an Operation for Dupuytren's Contraction of the Fingers. W. W. Keen.
4 *Digestion of Milk. George Richter.
5 *Mercury; Its Administration Hypodermically in Syphilis. William F. Bernart.
6 *Volvulus of the Stomach. C. D. Spivak.
7 *Multiple Visceral Lesion. A. L. Benedict.

1. **Chronic Nephritis.**—Anders considers the diet most important. He thinks clinicians tend too much to giving an insufficient amount of albuminous aliment, and finds a moderate quantity allowable and often beneficial. He is not inclined to think the red meats especially more dangerous than the white. In general he would say that whole milk diluted should make a considerable portion of the diet, while the meats should be restricted as a rule, and fruits, green vegetables and rice be given more freely. The individual meals should be small and taken at three-hour intervals. The extent to which the diet contributes to nutrition should be carefully estimated, as shown by noting the effect on the intensity of the albumin and particularly on the kidney elimination of normal metabolic products. He does not recommend chemical substances as tests for secretory function. The use of cryoscopy to determine the kidney secretion is specially mentioned. The patient should keep a careful record of the body weight at intervals and the diet be regulated accordingly. He also insists on the value of systematic blood examinations.

2. **The McGraw Method of Gastro-enterostomy.**—Lloyd describes the McGraw operation, using the illustrations employed

in Walker's paper in THE JOURNAL of January 17. He believes in a good-sized rubber ligature, and he thinks Willy Meyer's suggestion of using a 4 mm. rubber cord should be adopted. He has had 7 cases, with no deaths, operated on thus. Six were successfully carried through by the McGraw method, but in the seventh, operation was completed by suturing on account of the breaking of the rubber. He does not think, however, that the method would be applicable in entero-enterostomy necessitated by complete intestinal obstruction.

4. **Digestion of Milk.**—Richter argues for the use of preservatives in milk, claiming that an overdose of an antiseptic is not so harmful as infected milk, and that the absolute forbidding of these preservatives, formaldehyd, boric acid, etc., is illogical and detrimental to the health of the community.

5. **Mercury in Syphilis.**—Bernart holds that the hypodermic method of using mercury in syphilis will cure many cases which under other methods are known as incurable, and will place the treatment on a more scientific basis, and allow the keeping of better and more accurate records. This method is, he says, absolutely essential in syphilitic lesions of the nervous system, still amenable to specific treatment. Here will be found its greatest field. He insists on the importance of accessory treatment; thorough cleanliness of the teeth and mouth, regulation of the diet, abstinence from alcohol, the observance of strict hygienic conditions, outdoor exercise, fresh air, sunshine and baths. The method he uses is to inject in the post-trochanteric region, the dosage varying within certain recognized limits to suit the individual. The principle in the severe cases is to give the largest dose possible without producing ptyalism.

6. **Volvulus of the Stomach.**—Spivak reviews and reproduces cases and discusses the mechanism. Parts of his conclusions are as follows:

Volvulus of the stomach occurs in all ages and in both sexes.

Digestive disorders may be considered as etiologic factors.

Volvulus of the stomach may be divided into (*a*) that due to organic changes produced by adhesions, ulcerations, tumors and contractions, and (*b*) that in which no visible organic changes have taken place.

The characteristic symptoms are: Sudden onset; distension, which commences in the left hypochondriac region, and which gradually increases in size; a tumor, which gives, on percussion, a tympanitic sound; vomiting or regurgitation immediately following ingestion of food or drink; no belching, no escape of flatus; inability to pass a sound into the stomach.

When the condition is recognized, early operative interference is indicated, and recovery is almost certain.

7. **Multiple Visceral Lesion.**—This term is used by Benedict to imply disease where the heart, liver and kidneys are chronically inflamed, the degenerative lesions being more or less interdependent. He includes them in the digestive specialty on account of the importance of nutrition of these patients, and of the important diagnostic problems as regards the size of the liver, the acidity of the urine, blood and stomach contents and the fact that sometime in their course the actual treatment must be mostly directed to the digestive organs. In many instances the liver is more affected than the heart and kidneys, and the liver itself is quite directly dependent on the dyspeptic troubles. He mentions the importance of diet, regulation of the amount of water, etc., and remarks that enteroclysis, aside from its local influence in the removal of toxins, has its value as a cardiac and circulatory stimulant and is one of the best means of treating the renal element of multiple visceral lesions. Saline solution is one of the most harmless and efficient diuretics; similarly gastric lavage is valuable. He does not think that hypodermoclysis or intravenous injections are necessary in these cases unless the state of the bowel prohibits enteroclysis. The hemorrhages which may occur from varicosities due to back pressure in the portal system are remarked on, and also that the pancreas is likely to participate in the sclerotic process involving the liver. The condition of the blood and ductless glands must also not be neglected.

New York Medical Journal.

October 31.

8 Presidential Address to the Medical and Chirurgical Faculty of Maryland. Eugene F. Cordell.
9 *Conservative Gynecologic Surgery; Its Practical Results. Henry C. Coe.
10 *The Diagnosis of Head Injuries. Clinton B. Herrick.
11 The Treatment of Diseased Faucial Tonsils in the Adult. Eugene W. Davis.
12 *The Present Status of Spinal Subarachnoid Cocainization. Ernest G. Mark.
13 *A Consideration of the Pathology and Treatment of Cancer. Leonard Weber.

9. **Conservative Gynecologic Surgery.**—Coe notices the methods of different operators, with special reference to results. In over 5 per cent. of his conservative operations he has been obliged to perform a secondary laparotomy in order to effect a cure, and he thinks this fairly represents the experience of other surgeons. Those who have employed the vaginal route report better results, but one can not accept the sweeping statement of Joseph Price that the necessity for a second operation implies a want of skill or technic in the first. The results of conservative surgery of the adnexa have their drawbacks, and we have not yet discovered any certain methods of preventing the re-formation of adhesions or predicting what cases will give further trouble. He does not, as a rule, favor resection of the tubes. He thinks it rather an unnecessary procedure, and as regards relief of symptoms from conservative operation, the results may be disappointing. What the patient generally wants is relief from pain and she will be disappointed if this is not obtained. Disturbances of menstruation are common after partial removal of the ovaries, amenorrhea, but more often profuse menorrhagia. He has been obliged to remove the uterus at least in a dozen cases on account of hemorrhage alone. His results in cure of sterility have not been so brilliant as those reported by Dudley, since less than 3 per cent. of his patients have become pregnant after resection of the tubes and organs. While he believes in the propriety of preserving the ovaries even at the risk of a second operation, the question must suggest itself as to whether it is not better to leave a doubtful ovary alone than to tinker with it, and thus possibly invite cystic degeneration or the cirrhosis which we fear. We can not exactly define the border line between normal and pathologic, even on the operating table. Conservatism, however, has come to stay, and with more perfect technic and experience better results may be hoped for.

10. **Head Injuries.**—Herrick describes the various forms of head injuries, including contusions, scalp wounds, fractures of various types, contused brain, lacerations, hemorrhage, etc.

12. **Spinal Cocainization.**—Mark has investigated this subject, sending a circular out to the various surgeons, most extensive users of spinal cocainization, asking them concerning mortality attributed to it, the technic, and the dangers as compared with general anesthesia. He reviews the deaths reported and finds little evidence of the responsibility of the method for the result. Only one surgeon heard from has abandoned the method on account of the "difficulty of obtaining uniform sterile solutions of strength"; some preferred tropacocain to cocain. A number of cases are reported. He concludes that the method is as safe, if not safer, than general anesthesia, and that we may safely employ a dose up to .48 of a grain of cocain without fear of toxic effects, and that shock, when present, is decidedly less than that of general anesthesia. There is less danger of annoying sequelæ, but on account of the variability in the length of its analgetic action, it is contraindicated in prolonged operative procedures. Only one death has been reported in this country that could be attributed to its use, and the patient was an elderly woman, weighing 318 pounds, with a very serious heart lesion. The surgeon in this case, Dr. Morton, is still one of the most devoted adherents of the method.

13. **Cancer.**—Weber does not implicitly accept the parasitic theory of cancer. The parasite has not been demonstrated. Early excision is the method to be employed. He has given up escharotics and advises against them. The use of the *x*-ray should follow the operation. In many cases much can be done by diet, hydrotherapy, sunshine, tonics, etc., to increase the resistance and prevent recurrence.

Boston Medical and Surgical Journal.

October 29.

14 *The Relation of Laboratory Research to the General Practitioner of Medicine. Horace D. Arnold.

15 Pneumothorax Associated with Fracture of the Ribs; Report of Two Cases. Fred T. Murphy.
16 *Some Observations on X-Ray Therapeutics in Skin Diseases. Frederick S. Burns.
17 *Record of Parasitic Infections in the Philippines. W. J. Calvert.

14. **Laboratory Research and the General Practitioner.**—The importance of laboratory methods is insisted on by Arnold, who, nevertheless, points out that it is one of the faults of our medical education at the present day to produce an exaggerated view in the mind of the medical student as to the importance of this work in general practice. He says it requires some courage to say that this side of medical education is overdone in schools, but the observation of recent graduates and students has convinced him that such is the case. While the laboratory expert has a better foundation he has also laboratory astigmatism, and common sense may be lacking. He thinks the general practitioner should have certain laboratory methods at his command, counting of the blood corpuscles, estimation of hemoglobin by means of Tallquist paper, examination of the urine, sometimes of the feces, sputum, pus, vomitus, and the gastric contents. The Widal reaction is rather beyond the general practitioner at present, and the laboratory should be depended on, but the bacteriologic diagnosis of diphtheria is important. He sums up by saying that the laboratory method in clinical medicine is of acknowledged value and such measures are not employed by the general practitioner as fully as they should be. The man who has plenty of time and does not choose to equip himself is short-sighted. The man who thinks he is too busy would find a limited sacrifice of time one of the best investments he could make. The practitioner who is too busy with general practice to do such work himself should have it done, nevertheless, where necessary.

16. **The X-Ray in Skin Diseases.**—Burns finds the α-rays of great value, in epithelioma especially, and says they offer the best relief to a certain class of such lesions. Some cases are better treated by excision and it is a waste of time to treat very small lesions for weeks when they can be effectually destroyed in a few minutes with the curette and cautery. Epithelioma and carcinoma below the cutaneous surface, and even lesions which have become deep by infiltration from the skin, should not be treated by the α-rays with the hope of cure. All such cases in which he has tried them have been failures and without permanent benefit, but there is almost a constant temporary relief from pain and sometimes considerable improvement in the general condition. The permanency of cure of epithelioma may be questioned, though he has not yet seen any relapses in his cases. He mentions cases of lupus, scrofuloderma, folliculitis of the beard, psoriasis and eczema treated with success. His experience includes 150 cases of skin disease treated by α-ray therapy.

17. **Parasitic Infections in the Philippines.**—In 136 autopsies Calvert found 53 cases of parasitic infections, 29 of ascarides, 10 of ankylostoma, 13 of tricocephalus and 1 of tenia. Forty of these cases were single infections, namely 25 of ascarides, 5 of ankylostoma, 9 of tricocephalus and 1 of tenia. Five were double infections of 2 or more; one was a triple infection of all three parasites. He says, considering the customs of the natives, especially as regards their drinking water, the figures are not so high as one would at first suppose. The small number of tenia is surprising when it is considered that cysticercus exists in 4 per cent. of all the hogs killed in Manila. No cases of trichiniasis were observed. Five cases of filariasis were found all from the Island of Luzon.

Medical Record, New York.

October 31.

18 *High-frequency Currents. Henry G. Piffard.
19 *Two New Methods of Determining the Digestive Activity of Gastric Juice. Henry Wald Bettmann and J. Henry Schroeder.
20 A Case of Neurofibroma of the Skin and Large Nerve Trunks in Which There Developed a Large Spindle-celled Sarcoma Beneath the Body of the Scapula. H. W. Austin.
21 *Some Notes on a Diet of Bread and Fruit, and Its Effects on High Blood Pressure, Dropsy and Obesity. Alexander Haig.
22 *Hallux Valgus. John G. Sheldon.

18. **High Frequency Currents.**—Piffard describes his methods and apparatus and their advantages. The article does not lend itself well to abstracting as regards the first point, and should be consulted for a full understanding.

19. **Gastric Juice Activity.**—Two new diagnostic methods are described by Bettmann and Schroeder, one based on the fact that albumin in solution will foam when shaken up, and if a digestive ferment be mixed with the foam the albumin will be digested and the foam will disappear, and with a rapidity in proportion to the amount of digestive ferment added. The results of this test agree with the law of Borissow and Schütz that the rapidity of the digestion is as the square root of the pepsin concentration. The other method is the use of the centrifuge to hasten Hammerschlag's test, instead of waiting twenty-four hours for the precipitate to form by means of sedimentation. The authors were able to get accurate results in two hours. It must be recognized that the law of Borissow and Schütz is not applicable to concentrated solutions of pepsin, but only to those of moderate strength. The steps of the process are given as follows:

The gastric juice to be tested is diluted with three times its volume of a .2 per cent. solution of HCl. This diluted juice and the standard albumin solution are placed in the incubator about fifteen minutes in order to be warmed to body temperature. In each of two test tubes are placed 10 c.c. of the standard acidified albumin solution. To one tube 5 c.c. of the diluted gastric juice is added, to the other (the control tube) 5 c.c. of a .2 per cent. solution of HCl. These tubes are then placed in the incubator at 37 to 40 C. for exactly seventy minutes. At the end of that time they are removed, and 10 c.c. are taken from each tube and placed in the centrifugal tubes graduated to .02 c.c. To each tube is added 5 c.c. of a 10 per cent. solution of trichloracetic acid and, after inverting the tubes several times, they are placed in a high-speed centrifugal machine and centrifuged two hours. At the end of this time the tubes are removed and the volume of sediment measured. The sediment in the control tube will be an index of the original albumin strength of the standard solution. The sediment in the second tube will be less, if digestion has taken place, the difference in the two sediments representing the proportion of albumin which has been transformed into peptone.

21. **A Bread and Fruit Diet.**—Haig points out the advantages of a bread and fruit diet in the high-blood-pressure group of uric-acid food poisonings, which used to be considered special diseases under the names of epilepsy, neuralgia, asthma, Bright's disease, etc. The great point in the relief of these troubles is the lowering of the blood pressure which can not be brought about with a milk diet on account of the large proportion of fluid contained. By cutting down the fluid to the smallest amount compatible with comfort, and feeding on breadstuffs, dried fruit and fresh fruit, nuts, etc., a blood pressure of 150 to 160 mm. of mercury can be reduced, he says, in a week or two to one of 120, with a corresponding improvement in all the symptoms above mentioned. This diet not only reduces the blood pressure, but eliminates also the source of the uric-acid poisoning.

22. **Hallux Valgus.**—After noticing the various methods of operating for this condition, Sheldon gives his own as follows:

Once having removed the infected bursæ, the skin incision is made according to Dawbarn, except in cases with a tender bursa. In these cases excise the bursæ and as much of the overlying skin as is compatible with complete closure of the wound. The next step is to free the inner portion of the distal end of the first metatarsal with a chisel or periosteotome. The inner one-half or two-thirds of the head of the bone is then removed with bone forceps. The outer one-third or one-half of the articular surface of the metatarsal and the phalanx are not disturbed. The extensor tendons of the great toe are then divided. The fascia and ligaments are then drawn together with catgut and the skin approximated with silkworm gut. The toe is held in proper position with a planter splint and adhesive plaster. I usually apply a constrictor before operating; but, without constriction, the hemorrhage is slight.

He has operated on 12 cases in this way with invariably perfect results in three or four weeks. It assures a movable joint, there is no great toe shortening, and the deformity is corrected. If the bone is affected the abnormal part is removed; the space resulting from removal heals by the blood-clot process and the extensor tendons are so lengthened that they do not tend to reproduce the deformity.

Medical News, New York.

October 31.

23 *Speculative Investments for Physicians.
24 *On the Production of Specific Cytolytic Sera for Thyroid and Parathyroid, with Observations on the Physiology and Pathology of the Parathyroid Gland, Especially in Its Relation to Exophthalmic Goiter. W. G. MacCallum.

25 *Skin Lesions Associated with Rapid Growth of Long Bones, Lineæ Albicantes. W. P. Northrup.
26 *Caffein in the Treatment of Alcoholic Toxemia. Arthur J. Hall.
27 *A Case of Chronic Lymphatic Leukemia without Enlargement of the Lymph Nodes. George Blumer and Hermon C. Gordinier.

23. Speculative Investments for Physicians.—This article was written largely at the instance of Dr. Osler, who has noticed the constant attempts that are being made by promoters to induce physicians to become interested in speculative concerns. The general tone of the article is throughout discouraging to such investments. The successful speculator is the one who loses early and stops.

24. Thyroid and Parathyroid Bodies.—MacCallum notices the claim of Gontscharukow that he has produced a serum the use of which indicated the influence of specific antithyroid toxins and gives in detail his own experiments bearing on this point. He inoculated geese with thyroid extract and used their serum on dogs. On the whole his experiments throw doubt on Gontscharukow's results. As far as any results were obtained from his experiments, they were that an attempt to produce cytotoxins capable of destroying cells or glands *in situ* was a failure, but it may be possible that a material was produced in geese which, combined with the normal secretion of the dog's thyroid or parathyroid, might neutralize it and cause the symptoms that ordinarily follow extirpation to be mitigated in certain instances. He also experimented with parathyroid excision and remarks on the symptoms produced, which are somewhat similar to those of exophthalmic goiter. He concludes that it is probable that the parathyroid produces a material that neutralizes poison produced elsewhere and that the poison thus neutralized can be mechanically washed out with relief of the symptoms. He was able to relieve the symptoms produced by parathyroid excision by injecting the blood of a normal dog into the veins of a dog suffering from removal of these glands and the result was complete relief. He also experimented to determine whether the effects were on the roots of the motor nerves or higher, and concluded that it was not alone the neurons of the anterior horns, but the upper motor neurons were also affected. Urinary examinations were made and the results of all the experiments seemed to show that there was a distinct difference between the effect of the parathyroid and thyroid glands, the latter more or less controlling metabolism; the former having apparently an entirely different function. The question whether exophthalmic goiter is the result of thyroid insufficiency is unsettled, but he thinks it is doubtful that such is the case since we know that extirpation of the thyroid, including the parathyroid, relieves the condition in many cases. He has lately been treating a woman suffering from exophthalmic goiter with parathyroid, but so far without results.

25. The Skin Lesions of Rapid Growth.—Northrup describes and illustrates a case of lineæ albicantes of the knee occurring after typhoid fever in a rapidly growing youth, and quotes from Comby's work on children's diseases, the only one in which he has found a description of similar conditions.

26. Caffein in Alcoholic Toxemia.—Hall finds that caffein administered in doses of 1 to 2 grains every one, two or three hours will usually so effectually quench the thirst or craving for alcohol in twenty-four or forty-eight hours that most confirmed habitués will voluntarily discontinue its use. He reports four cases. Where there is insomnia due to the caffein, it is different from the insomnia of alcohol, and much less disagreeable. He does not advocate caffein as a specific, but it appears to be a physiologic antagonist to alcohol as much as belladonna is to opium. If this is once established, the contention that alcoholism is a disease will have to be abandoned, and the fact that it is a toxemia must be admitted.

27. Leukemia.—Blumer and Gordinier give carefully reported cases and discuss the pathology. They conclude that while myelogenic leukemia is invariably a disease of the bone marrow, lymphocytic leukemia may be a disease either of the lymph apparatus, the bone marrow, or of both. They further express the belief that specific differences exist between the blood picture of the different forms.

Cincinnati Lancet-Clinic.

October 31.

28 On the Technic of Amputating in the Presence of Suppuration, Gangrene or Mortification. Thomas H. Manley.
29 Chorionic Villi. James W. Rowe.
30 Surgery of the Prostate, Pancreas, Diaphragm, Spleen and Thyroid. (Continued.) B. Merrill Ricketts.

St. Louis Medical Review.

October 31.

31 The Medical Expert. Edward O. Plumbe.

University of Pennsylvania Medical Bulletin, Philadelphia.

October.

32 *Acute Lymphocytic Leukemia, with Reference to Its Myelogenous Origin. A. O. J. Kelly.
33 Primary Cancer of the Lung. J. H. Musser.
34 *Diabetes as a Complication of Pregnancy. Alfred Stengel.

32. Acute Lymphocytic Leukemia.—Kelly says our knowledge warrants the following opinions: The clinical manifestations and the blood pictures of leukemia justify the usual division into two clinical varieties, called the lymphatic and the myelogenous (or splenomedullary). Since, however, the so-called lymphatic leukemia may occur with little or no alteration in the lymph glands, and there is good evidence for believing that, whether these enlarge or not, the typical leukemic blood picture does not develop until the bone marrow becomes affected, the bone-marrow lesions appear to be the essential ones, and as both varieties of leukemia are myelogenous in origin, the terms lymphatic and myelogenous seem hardly appropriate. He prefers to distinguish the two classes as lymphocytic and myelocytic leukemia. There is no special line of demarcation between the two types, as transition forms occur. The disease, probably in all the cases, is the result of proliferation of bone marrow, but it is also likely that some of the circulating lymphocytes in lymphocytic leukemia are formed in the lymphoid structures elsewhere. The differences in the clinical course of the disease are probably attributable to differences in the chemotactic agent, whatever it may be, whether an infection or intoxication. He is inclined to attach much importance to the large mononuclear non-granular cells of the bone marrow in these cases, believing that it may form large lymphocytes or myelocytes, its development in one or the other direction being influenced by the nature of the chemotactic agent concerned. It is possible, too, that time has something to do with it; the basophile cells are looked on as the younger form, while the neutrophile cells and their derivatives are of the older growth. At present there is no way of distinguishing, when found in the blood, the lymphocyte derived from the lymph gland from that derived from bone-marrow, but it is probable that those found in the circulating blood in the healthy are derived entirely from the lymph glands, while those occurring in lymphocytic leukemia are derived in large part, and in some cases exclusively, from the bone marrow. Finally he remarks that the clinical manifestations of acute lymphocytic leukemia are especially of interest in their marked resemblance to typhoid fever. There is reason to think, he says, that some cases have been presumed to have been typhoid fever, and the error has not been rectified even at the necropsy. The differential diagnosis is by examination of the blood and by microscopic examination of the tissues.

34. Diabetes in Pregnancy.—The cases of diabetes developing during pregnancy are discussed by Stengel, who reports observations and refers to a number of histories by Matthews Duncan, who also tabulates reported cases. The most important question is that of prognosis. It is correct to assume it to be a condition of great gravity, but the seriousness of the condition has perhaps been overestimated. While the results for both mother and child are dangerous they are less frequently so than has been generally supposed and Stengel thinks that careful hygienic, dietetic and medicinal treatment should always be resorted to. Increasing glycosuria, diaceturia, grave weakness and rapidly increasing emaciation would, of course, suggest prompt intervention.

Northwest Medicine, Seattle, Wash.

October.

35 *A Few Reasons for Early Operation in Gallstone Disease. Park W. Willis.

36 A Philosophic Review of the Crowning Sin of Civilization. Ernest Crutcher.
37 Hypodermic Injection of Pilocarpin. R. W. Perry.
38 The Lumbricoid of the Tropics. J. S. Stott.
39 The Value of the Blood Examination. Robert M. Stith.

35. **Gallstone Disease.**—Willis reports cases and asserts that almost certain and permanent relief may be afforded by early operation with very slight risk to life and slight discomfort; otherwise there is liable to be serious trouble and possible malignancy. He questions the statement that the gall bladder has no function, and does not believe in cholecystectomy as a rule.

In the discussion following, Dr. Hutchinson held that the gall bladder was an entirely useless organ and practically obsolete, like the appendix, and should be removed whenever it causes trouble. He did not consider that gallstone was the cause of cancer, but vice versa.

Wisconsin Medical Journal, Milwaukee.

October.

40 The Diagnosis of Hysteria. Hugh T. Patrick.
41 The Etiology of Some Pensioned Disabilities Measured by Modern Pathology. W. T. Sarles.
42 *Displacement of the Uterus. Gustave A. Kletzsch.
43 Immunity and Its Relation to Surgical Pathology. J. M. Dodd.

42. **Uterine Displacements.**—Kletzsch says that every effort should be made to correct uterine malposition. If out of place, the general health of the patient must suffer sooner or later, but malposition alone is not the sole cause of this; the lacerated, subinvoluted and relaxed pelvic tissues contribute their part. We know, moreover, that retroversion or flexion is the first step toward prolapse, and neglect may make the conditions still more difficult to remedy. As regards operation, he says the ordinary Alexander operation ought only to be done in cases of pure displacements; if complicated by adhesions or procidentia uteri, this operation will fail. Vaginal fixation may bring the body of the uterus forward, but it destroys one of the main points of support, that is, to the base of the bladder and pelvic fascia, and this in time permits sagging downward. Fixation to the anterior abdominal wall may raise the uterus above the plane of the pelvis, below which it belongs, and also fix the fundus unnaturally, but to Kletzsch it is, nevertheless, the best operation for the great majority of cases. It must be supplemented by repair of any lacerations of the cervix or perineum, otherwise it will fail.

Denver Medical Times.

October.

44 Address, Rocky Mountain Interstate Medical Association. C. H. Soller.
45 Some of the More Unusual Complications of Syphilis. William E. Bernart.
46 *The Deleterious Effects of the Excessive Use of Salt Chlorid of Sodium. (To be continued.) W. B. Parsons.
47 Hay Fever, Pollen Asthma, or Summer Catarrh. W. W. Woodring.
48 Relation of Orthopedics and Radiography. Byron C. Leavitt.

46. **Chlorid of Sodium.**—The experience of Parsons with chlorid of sodium has been rather peculiar. He had been an excessive salt eater, but at least eight years ago he began to have dizzy spells and hallucinations, also peculiar brain sensations and loss of memory. He had been a user of alcoholic liquors, sometimes enough to feel their effects, for twenty-five years. Thinking that this might be the cause he stopped, but without result. Then for a month he quit tobacco, which he had been chewing for many years, but with no change. Finally it occurred to him that salt might be the cause. He began to investigate, finding that salt in certain animal organisms was poisonous, and referring to his own clinical experience he found a case somewhat similar to his own. He therefore stopped the use of salt, with the result of the relief of all unpleasant symptoms, which again appeared on its re-use, hence he thinks salt was the cause of all his trouble. (His article is to be continued.)

New Yorker Medicinische Monatschrift.

September.

49 *Hayti—Klima und Krankheiten. A. Herzfeld.

49. **Hayti; Its Climate and Diseases.**—Herzfeld considers the climate of Hayti not unhealthy for the tropics. On the lower coast dirt and deteriorated civilization is the rule. He gives a black picture of the condition of the Haytian towns, but the minute one steps out of them one meets the most charming tropical vegetation. The diseases and climate are those of the tropics. After the European has been there for some months he generally suffers from the so-called local fever and then dysentery. The so-called "red dog," a sort of dermatitis caused by the sun is common, and he finds zinc stearate compound one of the best remedies. The habits of the sojourner there are generally bad as regards excesses. Cholera is not yet known; yellow fever occurs in epidemics; typhoid is not rare, and malaria in all its forms is frequent. Pneumonia and acute and chronic rheumatism are not rare in the coast region. Lepra and elephantiasis are frequent among the lower classes. Gonorrhea and syphilis are exceedingly common, and the blacks seem to be reckless and ignorant in regard to them. The drinking water is generally good and obtained through the old French aqueducts. The white population drink it mixed with rum "to kill the bacilli." The dwelling houses of the old Spanish style are good and are usually furnished abundantly with baths. The natives all take baths in a very primitive way, males and females together. He concludes by stating that Hayti is not yet afflicted with Eddyism and osteopathy.

Cleveland Medical Journal.

October.

50 *A Brief Résumé of the Literature on the Involvement of the Spinal Nerves and Cord in Influenza. Edward P. Carter.
51 *Cases of Isolated Paralysis of the Suprascapular Nerve. Frank E. Bunts.
52 Nephrectomy, Indication for, with Report of Five Cases. Henry A. Becker.
53 The Passage of an Open Safety-pin Through the Intestinal Canal. Hunter H. Powell.

50. **Influenza.**—Carter's résumé of the literature seems a fairly complete study of the subject. He concludes that under certain conditions the influenza toxin exhibits a remarkable predilection for the spinal nerves and cord, giving rise to a neuritis of the trunks of the peripheral nerves closely resembling that following diphtheria. In the spinal cord it is capable of reproducing almost any one of the pathologic conditions. As a rule, the involvement of the nerve trunks is very late, sometimes after the establishment of convalescence, and it is peculiar in not showing any affinity for any single nerve or group of nerves, but in being scattered. Recovery generally occurs rapidly after the subsidence of symptoms, though the case reported by Putnam and a number of instances by Franke appear as examples of chronic post-influenzal neuritis.

51. **Paralysis of the Suprascapular Nerve.**—Bunts has collected cases and discusses the etiology, pathology, etc. It seems to be due to sudden trauma or neuritis from other causes or associated with contusion or laceration of the nerve or loss of its continuity. The symptoms are summarized by him as: 1. Depression or shallowness of the supraspinous and infraspinous fossæ. 2. The impairment of external rotation of the arm. 3. Frequently a weakness in the elevation or abduction of the arm. 4. A probable slight displacement of the scapula. The diagnosis is not difficult, as a rule, but where it is obscure a few successive examinations, including electric reactions, will reveal the condition. It can not in all cases be made immediately; its rarity allows it sometimes to escape observation unless important symptoms are present. He thinks that cold and rest is the best treatment for cases due to sudden trauma, and suggests study of the synergistic action of other muscles that might be substituted for the paralyzed ones.

Old Dominion Journal, Richmond.

October.

54 X-Ray Therapy, with a Report of Cases. Ennion G. Williams.
55 *The Accurate Estimation of Pulse Tension. Henry W. Cook.
56 *Perineal Prostatectomy, with Report of Two Cases. J. Shelton Horsley.
57 Report of a Typical Case of Exophthalmic Goiter. William H. Lyne.
58 Some Remarks on the Importance of Otorrhea. Clifton M. Miller.

55. **Pulse Tension.**—The importance of pulse tension in obscure brain lesions, comatose conditions, typhoid, pneumonia, etc., are noted by Cook, who mentions the remedies that are

applicable. Of the cardiovascular stimulants, strychnin is undoubtedly the most reliable. Digitalis should be used with caution; it is valuable in toxic conditions. Cocain is useful, but transitory in effect. Adrenalin can hardly be regarded, he thinks, as either a cardiac or a vasomotor stimulant. He believes it distinctly injurious to the muscle fibers of the heart. The 3 cases which he saw die under its continued administration all closed with symptoms of cardiac poisoning, and he believes that, while it kept the patient alive for hours in shock, the drug was responsible for the ultimate cardiac failure. Aside from its local administration to stop hemorrhage, the uses of adrenalin are limited. Its administration as an arterial stimulant should be confined to desperate cases of profound shock where low tension pulse threatens immediate dissolution. Alcohol he never found to have any true stimulant action on the pulse tension. Saline infusions are likewise wanting in any true stimulant action. They are invaluable in aiding elimination and helping to refill the depleted vessels. Of the depressant drugs amyl nitrite acts promptly, but is very transient. Nitroglycerin acts in a few minutes, causing a fall which can not be recovered from in less than an hour. Sodium nitrite acts more slowly and is better for continued administration. In conclusion he mentions two conditions where the use of the accurate estimation of the pulse tension has been found valuable: 1. In following changes in patient's condition during anesthesia and operative manipulations, especially where the condition is weak or dangerous, and during chloroform anesthesia, which has a marked depressant action. 2. In detecting perforation in typhoid, daily routine estimations of blood pressure afford a new basis for decision. A sudden rise in blood pressure, in connection with suspicious symptoms, is strong confirmatory evidence. An unchanged blood pressure in spite of suspicious symptoms almost excludes the possibility of perforation.

56.—This has appeared elsewhere, see title 88 below.

Journal of Medical Research, Boston.

October.

59 *A Study of the Agglutinating, Hemolytic and Endotheliolytic Action of the Blood Serum in Variola. William T. Howard, Jr.
60 *Studies on the Etiology and Pathology of Variola. Roger G. Perkins and George O. Pay.
61 *Streptococcus Pyogenes in Variola. Ibid.
62 *Bactericidal Action of the Blood Serum in Variola and in Varioloid. Ibid.
63 On the Chemistry of the Chromatin Substance of the Nerve-cell. P. A. Levene.
64 On the Autolysis of Brain Tissue. P. A. Levene and L. B. Stookey.
65 *On the Digestion and Self-Digestion of Tissues and Tissue Extracts. Ibid.
66 The Agglutination of the Pneumococcus with Certain Normal and Immune Sera. Augustus Wadsworth.
67 A Pathology for Forage Poisoning, or the So-called Epizootic Cerebrospinal Meningitis of Horses. (A Preliminary Note.) D. J. McCarthy and Mazyck P. Ravenel.
68 Cat's Blood; Differential Counts of the Leucocytes. F. C. Busch and Charles Van Bergen.
69 *The Reactions of the Blood in Experimental Diabetes Mellitus—A Contribution to Our Knowledge of the Thermolabile Complements. J. E. Sweet.
70 The Pathology of Chronic Fluorine Poisoning. Fritz Schwyzer.

59-62. **Variola.**—The articles on variola, etc., have already been briefly referred to editorially.

65. **The Digestion of Tissues.**—Levene and Stookey have studied on three lines of research and here give their conclusions and the methods of analysis. They used an extract of fresh pancreas or other tissue and the white of an egg, boiled and unboiled. Unboiled extracts are digested more slowly than the ones that have been heated. The strength of the digestion depends on the quantity of enzyme added. The action of certain small quantities of pancreatic extract may be almost inhibited by unheated white of egg, though effective when added to previously heated egg white. It is evident, they say, from their experiments that in the course of digestion the enzyme action and the inhibitory action of the tissue extract become gradually exhausted. As regards the second point studied, namely, whether the tissue extracts inhibit proteolytic enzymes, it appears probable that the inhibitory action of the neutral extract is destroyed by acetic acid in the extract of spleen and liver, and that the acid extract contains their enzymes. In pancreatic extract and in the white of the egg an inhibitory action against the intracellular enzymes is demonstrated. The third question was whether the inhibitory action of the blood and tissues can be increased by immunization. The experiments showed that the blood of the immunized rabbits offers a markedly higher resistance toward tryptic digestion than that of the normal animal, while the behavior of the same blood toward splenic and hepatic extracts was not much different from that of normal blood. This may have been due to the fact that the inhibitory power against the enzyme was destroyed by the acetic acid. The work on immunization of animals against enzymes of the liver and spleen is in progress.

69. **Diabetes.**—From the experiments here detailed as to the recognition of blood in diabetes mellitus, Sweet considers the following conclusions justified:

1. The subcutaneous injection of an alcoholic solution of phloridzin, which causes a transitory glycosuria, is showed by a slight, though readily demonstrable, increase in the serum of the rabbit of the hemolytic complement for bovine erythrocytes; this increase is to be explained as occurring coincidently with the inflammatory reaction of the organism to the injection. 2. No effect of injections of phloridzin on the amboceptor for bovine erythrocytes can be demonstrated. 3. The intraperitoneal injection of adrenalin chlorid is followed by no marked effect on the blood reactions; the injection may, however, cause an inflammatory reaction, and so cause an increase of complementary activity. 4. The complete removal of the pancreas from dogs, which causes a true diabetes mellitus of severe type, is followed by a marked decrease of the hemolytic activity of the diabetic dog's serum for both rabbits' and guinea-pigs' erythrocytes. 5. The diabetes caused by the complete extirpation of the pancreas is further characterized by what is to be interpreted as a complete loss of the normal bactericidal property of the serum of the dog. . . . 6. This decrease of the hemolytic activity of the diabetic dog's serum for is due to loss of hemolytic complements. . . . 7. The complete removal of the pancreas is as necessary to this loss of complements as it is to the production of a diabetes. 8. The complete removal of the pancreas has not deprived the organism of its power to react to the inflammatory process by an increase of the complementary substances. 9. No disturbance of the normal relation of the receptors of the erythrocytes to specific hemolytic amboceptors can be demonstrated in the course of a true experimental diabetes. 10. The loss of the complementary substances in diabetes mellitus points conclusively to the fact that no relation exists between the leucocytes of any type and the production of the complements. 11. A decrease in the amount of glucose excreted by the diabetic organism can not be shown to occur in the course of a secondary infection, at least during the earlier stages of the diabetes.

Medical and Surgical Monitor, Indianapolis.

October 15.

71 *The Mineral Waters of Indiana. George D. Kahlo.
72 *Tuberculosis Among the Insane. William Charles White.
73 Report of a Case of Adeno-carcinoma of the Nose. L. F. Page.
74 A Note on Perineorrhaphy. Thomas B. Eastman.
75 Iliac Abscess—Operation and Treatment. A. F. Stewart.

71. **Mineral Waters in Indiana.**—Kahlo describes the mineral springs in Indiana and their merits. Winona, in Kosciusko County, possesses a mild alkaline-calcic water of merit in gastric disorders, incipient nephritis, renal calculi and cystitis, which contains 15.54 grains of calcium bicarbonate with 8.48 grains magnesium bicarb. per gallon. Mudlavia possesses a similar water, but is chiefly famous for its mud baths. The most popular resorts in Indiana are French Lick and West Baden Springs, which are practically one place, only a mile apart, and have excellent facilities for accommodating patients. The waters there are sulpho-saline-alkaline, containing 347 gr. of solids to the gallon, chiefly calcium, magnesium and sodium sulphate, magnesium carbonate and sodium chlorid, with traces of other constituents and carbonic acid in the proportion of 433 parts per million. He recommends these baths for chronic gastritis with deficient secretion and excessive mucus, associated constipation and disturbed metabolism; also in the irregular type of gout and in lithemia they seem to act as a specific. They are also useful in cholelithiasis, hepatic congestion and the early stages of cirrhosis. In albuminuria and diabetes he has seen the disappearance of the abnormal urinary constituents after a few days' treatment, but was not able to follow any of these cases beyond their stay at the springs, and can not, therefore, speak as to the permanent results. Advanced cases of nephritis were seemingly aggravated. Hyperchlorhydria and pregnancy are other contraindications. Cystitis, urethral inflammation, rheumatism and certain chronic cutaneous diseases are also benefited, the latter probably in part the result of external employment of the waters. There is apparently very little ac-

quired tolerance of the effects of these waters in constipation, and the relief is generally more or less permanent. He speaks of the effect of change of scene and adds a word of warning regarding the tendency to drink the stronger waters too frequently, especially if near meals.

72. **Tuberculosis Among the Insane.**—White pleads for the isolation of the tuberculous insane, as it is impossible, he thinks, to make them observe the ordinary precautions which would make their association with other patients safe. He would advise that each patient on admission be accompanied by a statement of the examining physician, including the family history and existing physical condition as regards tuberculosis, so as not to misplace cases on their reception. The sputum examination and tuberculin test are both recommended as diagnostic aids. The serum tests, he thinks, will be of service when better perfected.

Southern California Practitioner, Los Angeles.

October.

76 *The X-Rays and Diabetes. A. J. Comstock.
77 The Diagnosis of Myocardial Degeneration. Randall Hutchinson.
78 Privileged Medical Communications. David W. Cheever.
79 The Workings of the New York Law. Walter Soren.
80 Privileged Communications to Physicians. Frederick J. Stimson.

76. **X-Rays in Diabetes.**—Comstock warns against the use of the *x*-rays in diabetes, especially when the part treated is in the foot or hands. He reports a case in which the reaction of the tissues to the rays was so much out of proportion to what was expected that it was hard to explain the patient's susceptibility excepting on the ground of weakened tissue due to diabetes. Hence, he thinks, the need of this caution. The bad results were not permanent.

Texas Medical Journal, Austin.

October.

81 *Adrenalin Chlorid and Hydrochlorate of Cocain in Dentistry. R. Menger.
82 *Prostatectomy; Its Indications and Technic. G. Frank Lydston.

81. **Adrenalin in Dentistry.**—Menger has tested the combined action of adrenalin and cocain in the extraction of twelve teeth at one sitting. The results were so satisfactory that he reports the case. The immediate and after-effects were more effective and pleasant than under chloroform narcosis. The injections had to be continued during the operation, but there were positively no bad after-effects, notwithstanding the extreme nervousness of the patient. A 5 per cent. cocain solution and one-half part of 1 to 1000 adrenalin solution, injected along the alveoli, was used.

82. **Prostatectomy.**—Lydston reviews the indications and methods of prostatectomy. He thinks the Bottini operation should be considered only as a late resort in such cases, and has very narrow limitations. It is useful only when rational surgery is not applicable, and should be considered an operation of necessity rather than election. He prefers the perineal method, but employs the suprapubic section if necessary. No single operation can be successfully used in a routine way. He remarks that he has several cases under observation in which a suprapubic fistula has been made, and the patients are so well satisfied that they will not listen to any suggestion of radical operation.

Medical Age, Detroit.

October 25.

83 The Mischievous in Midwifery. W. P. Manton.

Virginia Medical Semi-Monthly, Richmond.

October 23.

84 Physical Examination of the Abdomen of the Gastric Patient. Wilbur F. Skilliman.
85 Retained Intubation Tube, with Report of a Case. Albert A. Cannaday.
86 Laboratory Diagnosis in Gastric Disorders. E. Guy Hopkins.
87 Effects and Treatment of Adenoids. H. M. DeJarnette.
88 *Perineal Prostatectomy, with Report of Two Cases. J. Shelton Horsley.
89 Is Stone in the Kidney Primarily a Surgical Disease? Benjamin K. Hays.
90 Use of Pigskin Grafts on Extensive Granulating Surface in Case of Superficial Gangrene; Clinical Report. J. Hamilton Browning.

88.—This has appeared elsewhere, see title 56 above.

Medical Fortnightly, St. Louis.

October 26.

91 Treatment of Syphilitic Lesions of the Nose and Throat, with Report of Cases. Algernon S. Barnes, Jr.
92 The Card System in Medical Practice. Carl E. Black.

Albany Medical Annals.

November.

93 The Management of Epidemics of Contagious and Infectious Diseases. J. S. Fulton.
94 The Education of the Nurse. Willis E. Ford.
95 Operations on the Stomach, with Special Reference to the Toilet of the Peritoneum. Albert Vander Veer.
96 Report of a Case of Tetanus. Douglas C. Moriarta.

Medical Sentinel, Portland, Ore.

October.

97 What Is the X-Ray? Richard Nunn.
98 Technical Management of the X-Ray. George E. Houck.
99 The X-Ray in the Diagnosis of Fractures. George F. Wilson.
100 The X-Ray in Diseases of the Skin and Glands. Luther H. Hamilton.
101 Etiology and Treatment of Pathologic Conditions of the Prostate, with a Report of a Case of Prostatectomy. W. L. Durand.

Pennsylvania Medical Journal, Pittsburg.

October.

102 Address, Medical Society of the State of Pennsylvania. William M. Welch.
103 Is There a Medical Profession? Thomas B. Davis.
104 *The Importance and Necessity of "Industrial Hospitals." W. B. Lowman.
105 *The Medical Expert Witness. G. W. Wagoner.
106 *Additional Reflections on State Medical Board Examinations. A. O. J. Kelly.

104.—This article was abstracted in THE JOURNAL of October 10, p. 925.

105.—Ibid.

106.—Ibid.

Dominion Medical Monthly, Toronto.

October.

107 Address on Medical Science. Charles S. Sherrington.
108 *Address in Medicine—The Lymph Circulation in Modern Medicine. Hugh A. McCallum.

108.—See abstract in THE JOURNAL of September 5, p. 626.

Hot Springs Medical Journal.

October.

109 Color Blindness. W. T. Salmon.
110 Report of a Case. (Non-Gonorrheal Genital Infection.) M. M. Lively.

Bulletin of the American Academy of Medicine, Easton, Pa.

October.

111 *Elective Studies in the Medical Course. Electives in Anatomy. Frederic H. Gerrish.
112 *Internal Medicine: to What Extent Required or Elective in the Medical Course? S. G. Bonney.
113 *Required and Elective Dermatology. L. Duncan Bulkley.
114 *Training for a Specialty: the Theory and the Condition, as Illustrated by Ophthalmology. Edward Jackson.
115 *The Life and Health of Our Girls in Relation to Their Future. James H. McBride.

111.—See abstract in THE JOURNAL, xl, p. 1602.

112.—Ibid.

113.—Ibid.

114.—Ibid., p. 1603.

115.—Ibid., p. 1527.

Columbus Medical Journal.

October.

116 Special Topography of the Ureter and Tractus Lymphaticus. Byron Robinson.
117 Stokes-Adams Syndrome and Acquired Syphilis. Cases. Fred Fletcher.
118 The Future of the Practice of Medicine in the United States. (To be continued.) L. G. G. De La Mache.

Alabama Medical Journal, Birmingham.

October.

119 A Case of Complete Adhesion Between the Soft Palate and the Posterior Pharyngeal Wall. Dunbar Roy.
120 Should the Public Be Educated in Matters Medical? T. A. Casey.
121 Hydramnios, Polyhydramnios Dropsy of the Amnion. J. C. Abernathy.

Louisville Monthly Journal of Medicine and Surgery.

November.

122 Gastric Carcinoma. Ben Carlos Frazier.
123 *Nasopharyngeal Adenoids. J. A. Stucky.
124 Complete Congenital Clefts of the Palate. James B. Bullitt.
125 Some Observations on the Prognosis in Acquired Syphilis. I. N. Bloom.
126 Epidemic Dysentery. W. L. Taylor.
127 Gastro-enteritis. L. F. Hammond.

123.—See abstract in THE JOURNAL of October 31, p. 1106.

International Medical Magazine, New York.

October.

128 Questions and Answers Concerning Gonorrhea in Women.
129 The Diagnosis of Gonorrhea in the Female. William B. Small.
130 The Topical Treatment of Gonorrhea in Women. W. A. Newman Dorland.
131 Laceration and Congenital Split and Erosion of the Cervix Uteri. Henry D. Beyea.
132 Painful Incarceration of Eleventh Rib. A. L. Benedict.
133 Clinical Notes of a Case of Hyperchlorhydria Successfully Treated by Mechanical Vibratory Stimulation. George I. Rochelle.
134 Gonorrhea in Women. E. E. Montgomery.

Interstate Medical Journal, St. Louis.

October.

135 Review of Eight Years' Work at the St. Louis Insane Asylum. Edward C. Runge.
136 Astereognosis in a Case of Tabes. Frank R. Fry.
137 Ocular Examination as an Aid to the Early Diagnosis of Multiple Sclerosis, with Report of a Case. John Green, Jr., and Sidney I. Schwab.
138 The Reflexograph and Its Uses—Being an Apparatus to Automatically Measure, Time and Chart the Knee-jerks, and for Other Purposes. J. M. Bradley.

FOREIGN.

Titles marked with an asterisk (*) are abstracted below. Clinical lectures, single case reports and trials of new drugs and artificial foods are omitted unless of exceptional general interest.

British Medical Journal, London.

October 24.

1 The Study of Structure in Relation to Function. W. H. Allchin.
2 *On the Importance of Accurate Muscular Analysis in Lesions of the Brachial Plexus; and the Treatment of Erb's Palsy and Infantile Paralysis of the Upper Extremity by Cross-Union of the Nerve Roots. Wilfred Harris and V. Warren Low.
3 The Physical Examination of the Upper Regions of the Chest. E. Lloyd Jones.
4 *Discussion on the Treatment of Gastric Ulcer. Thomas D. Griffiths, H. D. Rolleston and others.
5 Discussion on Susceptibility and Infection. Robert J. M. Buchanan and others.
6 *The Treatment of Pulmonary Tuberculosis by Formaldehyd. D. I. Chowry-Muthu.
7 Spinal Puncture in "Uremia." D. C. McVail.
8 *The Comparative Value of Oral and Rectal Temperatures in the Study of Pulmonary Tuberculosis. T. N. Kelynack and Sydney R. Williams.
9 The Mineral Water of Llangammarch Wells. W. Black Jones.
10 Discussion on the Results of Treatment of Malignant Diseases by Electrical Methods. Lewis Jones and others.
11 A Discussion on the Treatment of Tuberculous Disease by Electrical Methods. Chisholm Williams and others.
12 *Some Points in Practical Muscle Testing. W. S. Hedley.
13 Use of Electricity in the Treatment of Affections of the Digestive Organs. George Herschell.
14 The X-Rays as a Diagnostic Agent in Pulmonary Conditions. Joseph S. Bolton.
15 *Discussion on the Pathology of General Paralysis of the Insane. W. Ford Robertson and others.

2. **Erb-Duchenne Paralysis.**—Harris and Low report and discuss three cases and conclude that the fifth cervical is chiefly involved. A study of the articles of Thornburn and Sherrington and a remarkable case of Markoe seem to prove that motor innervation of the deltoid, spinati, biceps and brachialis anticus is derived from the fifth cervical root and they, therefore, operated, uniting this root to the sixth. In no case has the time elapsed been sufficient to judge as to the perfect success, but the results thus far seem promising. The operation, while it has some difficulties, is not an impracticable one, and is worth trying. There will have to be some relearning of the muscles and co-ordination of impulses with the new connection, but the authors say in all probability the nearer the two nerves are to one another in respect to the cord segment to which they belong the less the difficulty will be after cross-suturing in overcoming any tendency to inco-ordination. They, therefore, recommend suturing the fifth root into the sixth rather than into the seventh in such cases, as they consider that the sixth is not affected in the ordinary form of this paralysis. They also specially urge the importance of employing careful faradic stimulation of the nerve trunks in all such operations as an aid to accurate scientific diagnosis.

4. **Gastric Ulcer.**—Griffiths treats all his cases of gastric peptic ulcer by putting the stomach absolutely at rest and abundant rectal feeding. The patient is put to bed for at least twelve days, the bowels cleaned out by enemata and rectal feeding commenced almost immediately. Nutrient enemata at a temperature of 97 to 100 are given every four hours and in the intervals drink enemata given according to the needs. He does not allow the patient to take any liquid by the mouth, and the stomach should be kept absolutely quiet. He specially mentions the condition of the tongue and the smell of the breath as valuable guides to the efficiency and sufficiency of the rectal feeding. When it is sufficient the tongue is moist and healthy, and the breath is sweet, while that of a starved patient has a peculiar offensive smell, which is hard to describe; perhaps the closest to it is the drunkard's breath. Moreover, the patient is comfortable when sufficiently fed. When the rectum is intolerant of an artificial enema, which rarely occurs, he would give a few minims of laudanum, 5 to 10 minims, two or three times in the twenty-four hours. Feeding by the mouth is very carefully begun on the eleventh day.

Rolleston follows much the same lines, forbidding all water or any food by the mouth and relies on rectal injections entirely. As regards medicinal treatment he would try potassium iodid in chronic gastric ulcer of adult males, as there is a possibility of specific character. The importance of local treatment of the mouth can not be overestimated. Carefully washing out the stomach with mild antiseptic solution or water or the running in of a large amount of bismuth are sometimes usefully employed. Of course the symptomatic treatment of the patient is sometimes required. Parotitis, which is a complication occasionally seen in gastric ulcer with rectal feeding, rarely requires operation. Apart from perforation the only acute complication which requires operation in gastric ulcer is repeated hemorrhage, which does not yield to medical treatment and endangers life. He speaks of the importance of oral sepsis in producing vomiting. He has seen striking benefit from counter-irritation by blisters to the epigastrium. In chronic gastric ulcer operation is justified when there is constant pain not relieved and when there is an intermittent or permanent pyloric obstruction and lastly, when hematemesis recurs in spite of the medical treatment.

6. **Tuberculosis.**—Chowry-Muthu reports the results of treatment of pulmonary tuberculosis by the inhalation of formaldehyd or creosote vapor in connection with the open-air treatment. Notwithstanding the use of the latter, he thinks the drug treatment had its effects. He has also tried intravenous injection and considers it also of value. He speaks well of the electric treatment on the Crotte plan. The open-air treatment, he says, requires a great sacrifice of time and means, and should be supplemented by something else. Serum-therapy is in its infancy. Special drugs by the mouth are disappointing. Tuberculin has not yet developed. The continued inhalation and vapor treatment by formaldehyd is simple and can be used in all cases. The intravenous injection used with gas should be given a trial in the early cases, and if it does no good it at least does no harm. The electric treatment is plausible and hopeful.

8. **Tuberculosis.**—The comparative value of oral and rectal temperatures of pulmonary tuberculosis is discussed by Kelynack and Williams, whose conclusions are as follows:

1. Temperatures carefully taken in the mouth during rest form a reliable guide in the management of phthisical cases under conditions of sanatorium life. 2. Temperatures taken in the mouth during or shortly after exercise can not be considered trustworthy unless registered with such precautions as militate against their general practical applicability. 3. Temperatures taken in the rectum during rest, generally speaking, register higher than in the mouth, but do not otherwise usually afford any special assistance in the management of phthisical cases. 4. Temperatures taken in the rectum during or shortly after exercises, in both healthy and phthisical subjects, register a temperature considerably higher than that in the mouth and, while in the non-tuberculous the return to normal is more rapid than in the tuberculous, no special direct advantage for the phthisical appears specially to accrue from this method. 5. For practical purposes in the management of phthisical cases undergoing so-called sanatorium treatment the registration of temperature by the oral method, when taken during rest and with due care, affords reliable guidance.

12. **Muscle Testing.**—Hedley calls attention to the degenerative reaction as an important diagnostic aid. He thinks that with all the new things, the medical man is in danger of forgetting older valuable methods. The practical clinical point he makes is that while increased anodic contraction with decreased cathodic contraction—which is given as an essential point in the recognition of degeneration by some—is an important

symptom of degeneration, we must not expect it to be always present as its appearance depends on the realization of many conditions.

15.—See abstract in THE JOURNAL of September 12, p. 678.

The Lancet, London.

October 24.

16 The Study of Structure in Relation to Function. W. H. Allchin.
17 *On the Effect of Perforation of the Colon by Small Foreign Bodies, Especially in Relation to Abscess of an Epiploic Appendage. J. Bland-Sutton.
18 The Correction of Hereditary Tendencies. Samuel Wilks.
19 *On the Use of Pure Carbolic Acid in the Treatment of Smallpox. A. E. Brindley and F. W. Bonis.
20 *A Simple Method of Performing Intestinal Union. Alexander MacLennan.
21 On the Value of Saline Infusion in the Treatment of Enteric Fever. D. G. Marshall.
22 The Value of Blood Examinations in Abdominal Diseases. C. J. Nepean Longridge.

17. **Colon Perforation.**—Bland-Sutton reports and illustrates two cases which show that a foreign body may perforate the large intestine and lodge in an epiploic appendix. The bodies in these cases were pieces of straw and metal. These foreign bodies are enclosed in fecal concretions which show how angular and dangerously pointed bodies may traverse the colon and be safely ejected without harm to the host. Common as anal abscess is, he thinks it stands in very small proportion to the number of cases where small foreign bodies are daily ingested and ejected.

19. **Carbolic Acid in Smallpox.**—Brindley and Bonis report the results of cases in which smallpox was treated by penciling the vesicles with pure carbolic acid. The effect was shown in the rapid shriveling up and scabbing of the vesicles. Two or three applications may be made if necessary over certain parts of the body. An important part of the treatment is the securing of early removal of scabs by oil poultices or otherwise to prevent subsequent abscess formation. The action of the drug is not irritating, but rather palliative, and appears to be a local one, the acid penetrating the walls of the vesicles and disinfecting their contents. The total number of cases thus treated was 35, of which 22 were of the severe kind, mostly confluent; 5 were fatal, 2 of these were complicated with scarlet fever, and a third was malignant smallpox with subcutaneous hemorrhages. A large number of the cases had never been vaccinated.

20. **Intestinal Anastomosis.**—The method here described by McLennan consists in a curved, slightly tapering bone bobbin, the narrow end of which is inserted into the proximal end of the gut. It is fixed there by a ligature which binds the intestine into the outermost groove (A). Over this ligature is placed a plain rubber ring similar to an umbrella ring, which must be tight, but not too tight to prevent its being easily placed in position. The proximal end of the intestine so armed is inserted into the distal end of the gut far enough for it to cover the second groove (B). The distal end is ligatured into this groove over the proximal end in a manner similar to that by which the proximal end is fixed to the bobbin. The rubber ring under the distal end of the bobbin then has to be gently manipulated backward from its resting place over the first ligature in groove A and past groove B, lodging at last into the most inner groove (C). The conical shape of the bobbin favors this manipulation. Care must be taken that it is not pushed beyond groove C. Union is then completed by stitching the cut borders of the mesentery. Eventually all distal to the rubber ring comes away. The operation is an easy one to perform and takes much less time to carry out than to describe.

Revue de Chirurgie, Paris.

Last indexed page 937.

23 (XXIII, No. 10.) *Mother-of-pearl Workers' Osteomyelitis. A. Broca and P. Tridon.—Osteomyélite des nacriers.
24 *De la splénectomie dans la splénomégalie avec hépatopathie cirrhotique (type clinique, maladie de Banti). E. Quénu and P. Duval.
25 *Entrance of Air Into Veins During Gynecologic Operations. X. Delore.—De l'entrée de l'air dans les veines pendant les opérations gynécologiques.

23. **Pearlworkers' Osteomyelitis.**—Ignorance of the subject's trade may lead to an erroneous diagnosis, as this affection may simulate a tuberculous osteitis or subacute osteomyelitis. The surgical treatment necessary for the latter is useless, if not injurious, in pearlworkers' osteomyelitis, which subsides promptly on removal of the cause with complete return of the functions of the parts. In a case described in detail—the first in France—removal of the cause, with rest, was all the treatment Broca attempted, and recovery was complete in two months. The affection appears about the time of puberty, and is characterized by a hard, painful tumefaction of one or more bones of the limbs or face, gradually extending. It develops in the course of a few weeks or months, with slight general symptoms, and then subsides spontaneously, but displays a tendency to recurrence.

24. **Splenectomy in Banti's Disease.**—Quénu and Duval had a patient with splenomegalia and cirrhosis of the liver under observation for a long time, but the symptoms were bearable. Another patient exhibiting the same but severer symptoms was treated by extirpation of the spleen. Comparison of the course of the two almost identical cases shows the great benefit derived from the operation, the first of its kind in France. The spleen showed excessive development of some of the veinules and capillaries, with sclerosis of the trabecular tissue and atrophy or, at certain parts, actual disappearance of the malpighian corpuscles. In this case and in 3 reported by Banti, in which the cirrhosis of the liver had been clinically recognized, all treated by removal of the spleen, the patients were all restored to health except one, who succumbed to puerperal septicemia. There was no postoperative hemorrhage in any instance, and one of the subjects who had had hematemesis before was not troubled in this way afterward. The liver affection seems to retrogress, or at least be arrested, after the splenectomy, evidently due to the removal of the cause. Bessel-Hagen advocates splenectomy at any stage of the disease, but Quénu would restrict it to cases in which the patient was incommoded by the size of the spleen. Until this occurs he would not venture to remove it on theoretic grounds alone, and therefore refrained from intervention on his first patient. The patient operated on has recovered complete health, has married and borne two healthy children. The recovery was equally pronounced and permanent in Banti's cases treated by splenectomy, and, on the other hand, there is not a single case on record of recovery of a patient not operated on. Removal of the spleen is an empiric procedure, but experience shows that it cures the disease. The same result may possibly be secured by combining omentopexy and splenopexy, as suggested by Schani, but this has not yet been tried in the clinic.

25. **Entrance of Air into the Veins During Operations.**—Delore has been studying this subject since he witnessed the death of a woman from this cause during an abdominal, subtotal hysterectomy. He reviews the history of what is known in regard to the effects of air in the veins, both in experimental research and in the clinic. The fact is well established that sudden entrance of air into the veins is liable to prove fatal, and that dilatation of the veins is a predisposing factor. Another important factor is extreme anemia, noted in the case described and also in one reported by Biermer under the title of gaseous embolism during enucleation of a uterine myoma. The air replaces the lacking blood in the veins. It is possible, likewise, that the Trendelenburg position may have favored the introduction of air in the 2 cases mentioned. Thoracic aspiration is undoubtedly the cause of the entrance of air, and it might possibly be prevented by preliminary hemostasis in cases of pronounced anemia. Section of the vein between two forceps not only prevents hemorrhage but also entrance of air. When the air has entered, the opening in the vein should be closed at once to prevent further influx. Bégouin's experiences with animals are instructive. After insufflating air into the jugular vein of rabbits and dogs, he introduced a Dieulafoy aspirator into the right ventricle. As the air escaped the animal resumed the appearance of health while all the controls were rapidly dying. Insufflating more air later again into the vein after recovery, without subsequent aspiration, was followed by the almost immediate death of the animal. The results of these experiences

have not been applied to man, but puncture of the right ventricle might be advisable as a last resort in case of sudden penetration of air into the veins entailing distention of the right heart and alarming symptoms. When the air enters more gradually, even a much larger amount may be tolerated by the subject without much disturbance and with ultimate recovery.

Semaine Médicale, Paris.

26 (XXIII, No. 41.) *Des colorations du liquide céphalo-rachidien d'origine hémorrhagique. L. Bard.
27 De la splénophlébite. Rommelaere.
28 Recherches sur la fonction motrice de l'utérus. Maslus.
29 Letter from America. Le nègre des Etats-Unis au point de vue médico-chirurgical. F. Munch.
30 Anesthésie obstétricale par injections épidurales de cocaine. Jambon.

26. Diagnostic Significance of the Color of the Cerebrospinal Fluid.—Bard has long been expatiating on the importance of the information to be derived from his "three-tube test" examination of the tint of the centrifugalized fluid derived by lumbar puncture. Out of 300 cases in which lumbar puncture was made, the fluid showed an abnormal tint in 20. Besides the tint it is possible to examine the cytology of the fluid, the permeability of the meninges to iodid of potassium from without inward, and the variations in the hemolytic power of the fluid. In regard to the cytology, only the finding of desquamated endothelial cells has much diagnostic value. The permeability of the meninges to potassium iodid, previously ingested, may be useful, perhaps, in case of a non-hemorrhagic fluid, but in case of blood it does not convey any information as to whether the blood entered by transudation or by irruption. The variations in the hemolytic power of the cerebrospinal fluid are valuable indices, as under normal conditions the fluid does not dissolve the reds of the subject except at a dilution of 12 drops of distilled water to 10 drops of the fluid. In case of meningeal hemorrhage this power is augmented, and 4 to 6 drops of distilled water produce the same effect as the 12 drops in normal conditions. High hemolytic power is therefore a sign of a hemorrhagic lesion, while the reverse indicates an accidental hemorrhage. When the centrifugalized fluid exhibits a yellowish tint not due to hemoglobin, it is probably due to a pigment derived from hemoglobin left from old hemorrhagic exudations.

Beiträge zur klin. Chirurgie, Tübingen.

Last indexed page 1172.

31 (XXXIX, No. 2.) *Zur supracondylaren Fraktur des Ober-Armes. H. Hilgenreiner.
32 Ueber operative Behandlung der progredienten eitrigen Peritonitis. W. Weber.
33 *Zur Winkelmannschen Hydrocelen-Operation. T. Suzuki.
34 *Permanent Cures After Gallstone Operations. A. Schott.—Dauerheilungen nach Gallensteinoperationen.
35 *Operative Treatment of Gastric Cancer at Zurich. Schönholzer.—Die Chirurgie des Magenkrebses an der Krönlein'schen Klinik, 1881-1902.
36 Fall von muskulärer Makroglossie. P. Lengemann.
37 *Remote Results of Treatment of Actinomycosis at Tübingen. G. Heinzelmann.—Endresultate der Behandlung der Aktinomykose in der von Bruns'schen Klinik.
38 Occurrence of Lymph Glands in Cheek Substance. Trendel.—Ueber das Vorkommen von Lymphdrüsen in der Wangensubstanz und ihre klinische Bedeutung.
39 (Supplementary No.) Report of Czerny's Clinic, Heidelberg, for 1902.

31. Fracture of Upper Arm Above the Condyle.—Hilgenreiner emphasizes the necessity for differentiating between fracture from extension and fracture from flexion, as they require opposite treatment. He recommends early massage, and as soon as consolidation has occurred, tepid baths and active movements. He has observed 21 cases and describes them, with 30 radiographs and a review of the literature. Two-thirds of the cases occur between the fifth and tenth year.

33. Operation for Hydrocele.—Suzuki reports 33 cases operated on by Winkelmann's technic. In the majority the suture could be removed the fifth to the eighth day, and the patient could be dismissed the eighth to the tenth day. The operation was done with Schleich's anesthesia in most instances. Out of a total of 137 cases on record to date, recurrence has been noted in only 6. The method seems to be preferable to all others, as the intervention is insignificant, the healing is more rapidly completed, general narcosis is not necessary and the subject can be treated as an out-patient.

34. Remote Results After Gallstone Operations.—Schott reviews the experiences at Heidelberg with 180 patients operated on for gallstones. A later series of 170 cases is not included in this summary. In 11 per cent. stones were discovered later; in 8 per cent. emerging through the fistula. There was recurrence of pains in 1 per cent., with icterus in 10 per cent. of the conservative operations and in 15 per cent. of the drained cases. Bile fistulæ occurred in only 4.4 per cent., while in previous years the proportion was 9.1 per cent. Czerny ascribes this better result to his present practice of fastening the gall bladder to the parietal peritoneum and inserting a drain tube to which the edges of the wound cling so closely that the mucosa of the gall bladder does not project into the abdominal wound, interfering with its healing. Gastro-intestinal disturbances were noted in 36.6 per cent., probably due to formation of adhesions. In the total 180 cases followed for from five to six years there has been permanent cure of the tendency to biliary lithiasis in 95 per cent. Genuine recurrence of stones was not observed in a single instance, and in only 5 per cent. have symptoms developed which could possibly be attributed to the biliary system. The mortality of gallstone operations has been reduced to 5 per cent. and of cystostomy to 1.3 per cent. Cystectomy shows only 20 per cent. mortality and choledochotomy only 4.4 per cent., in comparison to the 12 per cent. of former series operated on. These percentages justify early operating in case of gallstones.

35. Surgery of Gastric Cancer at Zurich.—Schönholzer continues his review of Krönlein's operations. In this part he gives the details of 55 cases of gastrectomy with 27.2 per cent. mortality, and of 91 gastro-enterostomies, with 23 per cent. mortality.

37. Actinomycosis at the Tuebingen Clinic.—Heinzelmann reports 56 cases operated on since 1885. The prognosis depends on the localization of the process permitting extirpation. Of 39 cases in which the face was affected 98.7 per cent. were permanently cured. Of the 11 cases of abdominal actinomycosis, 27.2 per cent. were cured. Potassium iodid is always given in addition to the operative intervention.

Centralblatt f. Chirurgie, Leipsic.

40 (XXX, No. 40.) Zur Frage der retroduodenalen Choledochotomie. F. de Quervain.
41 Ein neuer Operations- und Extensions-Tisch (table). A. E. Stein (Wiesbaden).
42 (No. 41.) *Radical Operation of Inguinal Hernia Based on Anatomic Relations. C. Hofmann (Cologne).—Zur Radikaloperation der Leistenhernien, mit bes. Berücksichtigung der anat. Verhältnisse.
43 (No. 42.) *Combination of Rubber and Lisle Thread Gloves. Goepel.—Ueber die Verbindung von Gummi- und Zwirnhandschuhen.

42. Operation for Inguinal Hernia.—Hofmann remarks that in incipient inguinal hernia he has always been impressed with the large size of the internal ring, evidently congenital. He has also noticed that the spermatic cord seems to separate into its parts toward the back of the inguinal canal, and the hernia may find its way through between them, instead of merely pushing the cord—as a whole—to one side. He thinks it important not to touch the tissues with the fingers, and to open up the entire hernial sac and internal inguinal ring. The sac is then dissected out from the rear forward, carefully refraining from disturbing the funiculus spermaticus, leaving it unmolested in its nest. The operation then proceeds as usual, laying the main stress on the obliteration of the sac at the level of the parietal peritoneum and providing a support for it at the internal inguinal ring with one or more sutures of wire. The normal anatomic relations are carefully regarded and reproduced, the spermatic cord not removed from its place. He applies the supporting suture by passing the wire or other material through the internal oblique, then through the transverse fascia of the posterior wall of the inguinal canal, passing between the separate parts of the spermatic cord, and finally through the everted Poupart ligament. Tying the ends of the suture closes completely the inguinal canal without injuring the parts of the spermatic cord. The closure is more complete than with a Bassini.

A year has passed since he first began using this technic, and the results have been perfect to date.

43. **Combination of Rubber and Thread Gloves.**—The advocates of rubber gloves and of thread gloves are informed by Goepel that the advantages of both, with none of the drawbacks of either, are combined by simply drawing a pair of thread gloves over a pair of rubber gloves.

Centralblatt f. Gynäkologie, Leipsic.

44 (XXVII, No. 40.) Eklampsie, enorme Placenta. R. Koenig.
45 4 Fälle von Eklampsie. Windisch-Oedön.
46 Funnel Pelvis. W. P. Richter.—Zur Frage des ("einfachen") Trichterbeckens.
47 (No. 41.) 2 Fälle von Uterus-Ruptur. J. Lovrich (Budapest).
48 Zur Sectio cesarea, 6 Fälle mit gunstigem Ausgang. A. v. Valenta.
49 Nochmals über meine Modifikation des Hegar'schen Nadelhalters (needle holder). G. Burckhard.
50 (No. 42.) *Strumektomie als Noth-Operation in der Schwangerschaft (pregnancy). R. v. Fellenberg.
51 Spontaneous Healing of a Cervico-vaginal Fistula, and of Rupture of Uterus a Year Later in Another Pregnancy. Gallatia.—Ein seltener Fall einer Spontanheilung einer Blasencervixfistel, sowie ein Jahr darauf erfolgter Uterusruptur bei neuerlich eingetretener Schwangerschaft. Heilung.
52 *New Obstetrical Bag. R. de Seigneux (Geneva, Switzerland).—Neue geburtshilfliche Tasche.

50. **Emergency Strumectomy During Pregnancy.**—Fellenberg was called in 2 cases to relieve women suddenly suffocating from compression of the trachea by a goiter. The trachea was flattened to such an extent that tracheotomy alone would have been useless. After making an incision from the sternum to the cricoid cartilage, he carried it to the left in a Kocher angular incision and pushed out the incarcerated lobe, thus removing the pressure from the trachea. Artificial respiration was then applied and the patient revived, after which the remainder of the gland was extirpated at leisure. Although there had been no opportunity for disinfecting the field, the wounds soon healed. One woman bore a viable child two days later and the other healthy twins a month afterward.

52. **Obstetrical Bag.**—The points on which de Seigneux lays most stress include the keeping of each instrument wrapped in a separate linen bag, and placing all the instruments needed for certain interventions together, wrapping the group in a cloth fastened with safety pins. The entire bundle is then boiled; all danger of rusting is prevented by addition of a 20 gm. tablet of borax to the liter of water.

Deutsches Archiv f. klinische Medicin, Berlin.

Last indexed page 401.

53 (LXXVI, No. 6.) *Determination of Blood in the Presence of Other Anorganic and Organic Substances. O. Rossel (Basle).—Beitrag zum Nachweis von Blut bei Anwesenheit anderer anorganischer und organischer Substanzen in klinischen und gerichtlichen Fällen.
54 *Animal and Human Favus. O. Wandel (Kiel).—Zur Frage des Tier- und Menschen-Favus.
55 *Study of Case of Excessive Ascites from Thrombosis of Portal Vein. O. Schulz and L. R. Müller.—Klinische, physiologische und path.-anat. Untersuchungen an einem Fall von hochgradigem Aszites bei Pfortaderthrombose.
56 (LXXVII, 1-2.) *Zur Kasuistik der Visceral-Syphilis. H. Quincke (Kiel).
57 *Ueber Oxyuris vermicularis. A. Heller (Ibid.).
58 *Zur pathologischen Anatomie der Tetanie. R. Peters (St. Petersburg).
59 *Experimental Study of Disturbances in Circulation in Acute Infectious Diseases. Pässler and Rolly (Leipsic).—Ueber Kreislaufstörungen, etc.
60 Cytodiagnosis of Thoracic and Abdominal Fluids. L. v. Ketly and A. v. Torday.—Inwiefern ist die Cytodiagnostik bei der Beurteilung der Brust- und Bauchhöhlenflüssigkeiten zu verwerten?
61 Genuine Blood-Clot Casts of Trachea and Bronchi. E. Fabian.—Echte Blutgerinnsel als Ausgüsse der Trachea und der Bronchien in einem Falle von allgem. hemorrhäg. Diathese bei chron. Ikterus, zugleich ein Beitrag zur Lehre von den Bronchialgerinnseln.

53. **Determination of Blood in Stools and Vomit.**—Rossel has devised a method of blood determination which has never failed him. It revealed blood in the stools in suspicious cases of ulcus ventriculi when it was impossible to detect it by other means, and even the spectroscope findings were negative. The results of the test were confirmed by the course of the affection. The reagent is a mixture of an aqueous solution of Barbadoes aloin, alcohol and turpentine. In testing cases in which cancer or ulcer is suspected, the subjects must refrain from previous ingestion of meats, etc., containing blood and from iron medication.

54. **Favus in Man and Animals.**—Wandel believes in the multiplicity of favus, his researches indicating that the favus of mice is sometimes transmitted to man, but that the latter has an individual favus. A third variety, which mostly affects dogs, is scarcely ever transmitted to man. Fowls have still another kind of favus.

55. **Excessive Ascites from Thrombosis of Portal Vein.**—The liver was small but the biliary secretion was normal in the case described. The peritoneum absorbed the ascites in large measure, and the amount of the fluid poured out daily into the abdominal cavity could be increased by giving a diet poor in albumin, and diminished by giving abundance of albumin, especially milk. The proportion of nitrogen in the ascitic fluid varied with the amount of nitrogenous food taken, and nitrogenized extractives were found in it. By diminishing the intake of fluids the excessive transudation could be somewhat modified and the time for the next puncture postponed a little. About 20 to 25 liters were withdrawn at each puncture. There was nothing to explain the origin of the thrombosis in the portal vein.

56. **Visceral Syphilis.**—Among the interesting cases described by Quincke is one in which gummatous indurations in the cystic duct and head of the pancreas could be palpated in a syphilitic subject, with typical attacks of gallstone colic, which were assumed to mean a superposed biliary lithiasis. An operation, however, disclosed that there was no tendency to gallstone formation, but a tumor was found which was not disturbed. It subsided under iodid treatment. In a second similar case the portal vein and biliary passages were compressed by a gummatous proliferation. In a third, a gumma in the mesentery had caused stagnation of stomach contents and dilatation of the organ. The gumma was nearly as large as a man's fist and had developed to this size in the course of six weeks in an old syphilitic. Measures directed against the stomach conditions proved ineffectual, but under mercurial inunctions and iodid there was marked improvement. He also reviews a number of cases of aneurisms in syphilitics and 3 of brain syphilis. One of the latter patients presented a permanently subnormal temperature.

57. **Study of the Oxyuris.**—Heller describes the development of these parasites and the best mode of expelling them. The eggs passing from the mouth into the stomach hatch there and the embryo then travels into the small intestine. The female travels through the cecal valve and lays her eggs on the feces or mucus in the large intestine. The life cycle from the egg to sexual maturity is about five weeks. The best mode of expelling the parasite is to attack the young brood in the small intestine by administering calomel. This seems to be particularly effectual in carrying away the intestinal mucus which protects the parasites against the action of the vermifuge. Santonin or something of the kind is then given and followed by another purgative. This expels the young; the females in the large intestine can be evacuated afterward by an injection of one to three quarts of a .2 to .5 per cent. solution of sapo medicatus, taken in the knee-elbow position. This course of treatment should be repeated in a week, and the subject instructed to avoid reinfection through the dirt under the fingernails, etc.

58. **Pathologic Anatomy of Tetany.**—Peters announces that the histologic study of 8 cases of tetany has revealed that it is an organic affection, the lesion consisting in an interstitial neuritis or ganglitis. The part affected is the extradural connective tissue, and the lesion is a small-celled infiltration with hemorrhages or fibrinous deposits, or a jelly-like infiltration into the epidural tissue. This interstitial neuritis affects both motor and sensory nerves in their extradural portion. The intradural and intramedullary portions are free from it, and also the peripheral nerves. The ganglitis may assume the form of proliferation of the intracapsular endothelium or of infiltration of round cells into the stroma of the ganglion, or of degeneration of the protoplasm of the nerve cells with karyolysis. The process involves the nerve roots innervating the parts that are the seat of the muscular spasms. The latter

are not merely root symptoms from inflammatory irritation of the motor nerves, but are principally due to this pachymeningitic inflammation in the sensory sphere and exaggerated excitability of the motor nerves. This overexcitability of the motor nerves is the result of mechanical compression of the motor fibers in the root region by the products of the inflammation. As the openings in the dura and between the vertebræ are about of a constant size, the effect of these local pathologic processes is most marked the larger the size of the emerging nerve roots with their vessels. As the seventh and eighth cervical roots and the lowest lumbar and upper sacral roots are the thickest, the parts innervated by these roots suffer most from the effects of the lesions. Trousseau's sign can likewise be explained by this compression of the roots and vascular congestion with the entailed overexcitability of the nerves involved. Peters adds that he has noticed a new phenomenon characteristic of tetany, constant in 78 cases examined. He calls it the "jumping-jack sign." If the anode of a current of 3 to 4 milliamperes is placed on the breast, the cathode on the spine near the fifth to seventh cervical vertebræ, the arms jerk like those of a jumping-jack when the string is pulled. The legs jerk in the same way if the electricity is applied lower down, and on one side alone if applied to one side of the median line. This jerking is evidently due to overexcitability of the nerve roots.

59. **Disturbances in Circulation in Infectious Diseases.**—Pässler and Rolly state that their experimental and clinical researches have shown that the disturbances in the circulation induced in the course of acute infectious diseases are due to vasomotor paralysis. This is compensated for a time by extra work on the part of the heart, but the heart soon suffers from lack of its usual blood supply and becomes unequal to the task. The collapse is thus due not to direct injury of the organ by the infection but to the inadequate blood supply in consequence of the vasomotor paralysis. If it is possible to restore the blood supply of the heart approximately to normal, then it resumes its work and collapse is averted. In case of diphtheria, the heart may suffer in time from the direct action of the diphtheria toxin, its resisting power being reduced under the influence of the toxin until it may finally yield even without primary vasomotor paralysis. Pneumococcus toxin does not have this injurious effect.

Münchener Med. Wochenschrift, Munich.

62 (L, No. 40.) Significance of Hyperglobulia in Congenital Heart Affections. E. Fromherz.—Zur Bedeutung der Hyperglobulie bei kong. Herzkrankheiten.
63 *Acute Inflammation of Cecum. Reisinger.—Ueber akute Entzündung des Coekums.
64 *Zur Lehre von der Bakteriurie. Cnopf.
65 Action of Carbonated Saline Waters. O. Reissner and G. Grote.—Zur Wirkung der kohlensäurehaltigen Thermalsolen nach Versuchen an Nauheimer Bädern.
66 *Epidemic Pneumonia. F. Spaet (Ebern).—Ueber epidemische Lungenentzündung. (Concluded from No. 39.)
67 *Ultimate Results of Operative Treatment of Lung Abscesses. Karewski.—Die chirurg. Behandlung der Lungenabszesse, insbes. deren Dauerresultate. (Concluded from No. 39.)
68 (No. 41.) Weitere Untersuchungen über alimentäre Albuminurie. M. Ascoli and A. Bonfanti.
69 *Ueber Hypaesthesie bei Appendizitis. J. Peiser.
69½ Zur Pathogenese der Epilepsie (multiple Anglome des Gehirns mit Ossifikation). Creite.
70 *Influence of Alcohol on Size of Heart. A. Bickel.—Ueber den Einfluss des Alkohols auf die Herzgrösse.
71 Zur Kasuistik der Nägelerkrankungen. F. Bering (Kiel).
72 Conductibility of Organic Fluids. F. Engelmann.—Die Bestimmung der elektrischen Leitfähigkeit von Körperflüssigkeiten.
73 Ein Modifikation des Cooper'schen Kissens (cushion). A. Martina (Graz).
74 *Does Hygiene Lead to Race Degeneration? Max Gruber.—Führt die Hygiene zur Entartung der Rasse? (Commenced in No. 40.)

63. **Acute Infection of the Cecum.**—Reisinger reports two cases of apparently primary gangrenous typhlitis, in one of which constipation played an important part. In both cases the cecum alone was involved and the appendix was normal. He discusses the pathology of these cases and suggests that the peritoneal, free portion of the hinder cecal wall is less resistant than other parts, hence the danger of gangrene. He thinks the rule should be in deep-seated stenosis of the large intestine, where an artificial anus is required, that the cecum be examined and further treatment regulated by the findings. If there is danger from the cecum it would be better to make the artificial anus at this point rather than at the sigmoid flexure.

64. **Bacteriuria.**—Cnopf reports cases of children in which an infectious fever existed at first of dubious diagnosis, but which was explained by the examination of the urine, showing infection with the colon bacillus or with other microbes. He holds that infection of the contents of the bladder may occur without irritation of the bladder wall, and produce general symptoms with which the subjective symptoms do not altogether harmonize. In order to avoid confusion it is necessary not only to examine the urine chemically, but also bacteriologically, to get a fair idea of the nature of the disease and also the possibilities of its treatment.

66. **Epidemic Pneumonia.**—A suddenly-occurring epidemic of croupous pneumonia in a small German village is reported and the probable causes discussed by Spaet. He concludes that the spread of the disease, involving as it did some 13 per cent. of the population, must have been by contagion. Pneumonia undoubtedly is a contagious disease, but the contagion seems to depend more or less on local and temporary conditions, which need further study.

67. **Lung Abscess.**—Karewski holds that while natural healing of acute cases may occur in young individuals, and in case of small foci lying in the lung apices or larger ones in the base of the lungs, unless one sees that spontaneous opening is decidedly probable, or if the abscess does not completely empty itself, it is desirable to resort to operation. Before everything else, the condition of chronic suppuration must be avoided and timely operation prevent the formation of multiple suppurative foci.

69. **Hypoesthesia in Appendicitis.**—A number of cases are reported by Peiser. Nine of them showed marked abnormalities of sensibility in the right lower abdominal region. In one it was not certain, and in another there was no disturbance. Of the 9 cases noted, hypoesthesia existed in 6, and in 2 hyperesthesia, and 1 began with lessened, but ended with increased, sensibility. The local sensory disturbances were not well defined, and Peiser was not able to fully follow up the investigation. He asks, however, certain questions as worthy of note in regard to the occurrence of diminished sensibility in appendicitis: 1. In what percentage of cases of appendicitis do we find disturbance of sensation and what proportion of hypoesthesia and hyperesthesia? 2. What common symptoms have the cases of each kind? 3. Is there a difference as regards the intraperitoneal and retroperitoneal position of the appendix? 4. Have suppurative pus collections (greater or lesser) any influence on the occurrence and form of sensory disturbances? 5. What is the relation of this disturbance to the clinical course of the appendicitis before and after operation? 6. Does the number of preceding attacks have any influence on the course or form of the disturbance? 7. What is the condition as regards sensory disturbance in persons who have gone through an attack of appendicitis, but for the time are free from the disorder? 8. How are the sensory disturbances to be explained?

70. **Influence of Alcohol on the Size of the Heart.**—The question whether alcohol increases the size of the heart has a therapeutic bearing, since if such is the case we would not be justified in using it therapeutically in certain cases where we now employ it. Bickel has experimented as to this point on animals by subcutaneous injection or forced ingestion of alcohol in dogs, then examining the condition of the heart. From his results with the aid of the Moritz orthodiagraphic apparatus he does not prove any enlargement of the heart in animals from the use of alcohol. This result agrees with the observations of Moritz in corresponding experiments on the human being.

74. **Hygiene and Race Degeneration.**—In a long article in this and a preceding number, Gruber takes up the questions which have been raised as to how far hygiene tends toward racial degeneracy. The claim has been made that, like all animals, man as he approaches his natural state undergoes a process of natural selection which benefits the race as a whole, weeding out the unfit, and all the infirmities of civilization are

perpetuated, it is said, by the care we take of our defective individuals. Bad teeth, defective eyesight, hypersensitiveness to temperature, inability to endure hardships are mentioned, and alcohol, too, is said to have a selective action in weeding out the degenerates. Thus the larger the infant mortality the better the surviving specimens. Gruber statistically proves that where the infant mortality is high the adult mortality is also high, and that hygiene, instead of causing race deterioration, seems to be an agency for greater race vitality. He reviews a number of errors which he thinks are more or less common. It is an error, for instance, to assume that a greater sensibility or lessened resistance in all cases must lead to disease and death, and not less an error to speak of an inborn physical incapacity where there is an actual special weakness which causes death. We must consider many other possible factors, and we must remember that every defective individual who is weeded out in consequence of his defects has not necessarily had that defectiveness from his birth or is a born degenerate. It is also unscientific to make any sharp distinction between defectiveness and non-defectiveness as practiced, the one implying destruction and the latter perfection and growth. There is an infinite number of transitional stages between the two. Natural selection is no explanation of the facts as they occur in actual life, and it is poor policy to claim that the strong do not need the benefits of hygienic measures as well as the defective. He makes a special point of this as regards alcohol. While it has a limited selective action, it is nevertheless one of the most tremendous evils to the race. As regards mankind in general, the application of the principle of the struggle for life is not correct, and the improvement of the race will not be by the blind working of natural selection, but by rational race culture the chance for which is afforded to a large extent by the provisions of modern hygiene and civilization.

Gazzetta degli Ospedali, Milan.

Last indexed page 996.

75 (XXIV, No. 101.) *Sul laparocele inguinale e sua cura coll' embricamento delle aponeurosi. C. Garampazzi.
76 *Hypodermoclysis in Influenza. E. Cioffi.—Dell' ipodermoclisi nell' influenza.
77 (No. 104.) Emeralopia da parotite epidemica. A. Campani. One case.
78 *Su la legatura simultanea dell' arteria e della vena femorale. C. Orecchia.
79 Water Treatment of Infants' Gastroenteritis. A. Prandi.—Le gastroenterite acute dei bambini e la cura idrica.
80 Una modificazione della siringa ad S di I. Petit pel cateterismo retrogrado. G. Barbanti.
81 (No. 107.) Della polmonite lobare acuta. G. Corsini.
82 Exophthalmic Goiter. G. Migliacci.—Del gozzo esoftalmico.
83 *Cura chirurgica radicale del varicocele. C. Viscontini.
84 Contributo alla chirurgia conservativa dell' ovaio. E. I. Andreoli.
85 (No. 110.) Del intervento chirurgico in alcune forme di nefrite. A. Luxardo.
86 Poisoning from Aspirin. A. Borri.—Caso di avvelenamento per aspirina.
87 Local Treatment of Burns. M. Capurbano.—Cura locale delle scottature mercé il glicerolato tannico.
88 *Nuovo metodo per la ricerca dell' albuminuria delle orine. N. Introna.
89 La fisiologia del corpo tiroidea nell' ultimo ventennio. G. Urso.
90 (No. 113.) Caso di polimiosite ossificante progressiva. E. De Renzi.
91 Epidemia di ileo-tifo. F. Minella.
92 *Sulla cherato-congiuntivite bilaterale secondaria a reumatismo articolare. C. Ortale.
93 Sulla biologia morfologica del bac. tubercolare in mezzi inadatti al suo sviluppo (on unsuitable culture media). G. Guyot.
94 (No. 116.) Goiter. G. Migliacci.—Sulla patogenesi e cura del gozzo volgare.
95 Cura della peritonite tubercolare con le iniezione iodiche alla Durante. N. Palombari.
96 (No. 119.) *Contributo allo studio delle malattie funzionali del cuore. A. Amantini.
97 Infezione puerperale e pseudo infezione puerperale. N. Muglia.

75. **Treatment of Inguinal Laparocele.**—Garampazzi treats this condition by a method of repair which he describes in full, and states that several of the patients seen years afterward show the permanently successful results of the intervention. He discusses the relations between inguinal laparocele and traumatism and the various modes of operative intervention that have been proposed. He makes a curved incision, the convex side downward, to avoid the tissues in which the sweat and sebaceous glands are most numerous, and draws the layers of the aponeurosis one on top of the other to reinforce the wall, avoiding compressing the elements of the cord. He prepares the aponeurosis by turning back the upper lip of the wound as an ophthalmologist everts the eyelid. This produces a kind of artificial Poupart's ligament, after which he proceeds as for an ordinary Bassini. The lower flap of the aponeurosis is then sutured to the turned-over edge of the everted flap, after which the free edge is turned back into place and sutured.

76. **Saline Transfusion in Influenza.**—Cioffi believes that he is the first to apply this measure in influenza. He reports a case in detail in which the results were surprisingly good. The patient was a woman of 45, and when first seen the pulse was 142 and threadlike, there was great weakness, also dyspnea, progressing to actual collapse with constant vomiting and subnormal temperature for three days, notwithstanding the most energetic measures, caffein, etc. As a last resort, the patient being almost in articulo mortis, 100 gm. of a 7 per cent. salt solution were injected subcutaneously. The benefit was apparent in half an hour, and all the symptoms rapidly improved. There was a chill and slight fever during the evening, but by the next morning the pulse was 80 and strong, temperature nearly normal, and in three days the patient was completely cured.

78. **Simultaneous Ligature of Femoral Artery and Vein.**—Orecchia reports a case of stab wound of the thigh in a healthy young man, in which he found it necessary, in order to control the threatening hemorrhage, to throw a ligature around both the femoral artery and vein. Gangrene developed in consequence, and notwithstanding disarticulation of the limb the patient succumbed. He reviews the cases that have been reported in the literature in which the femoral artery and vein have been ligated. Gangrene followed in 8 out of 15 (Braun), and in 14 out of 24 published by other writers, while Tillmann, Sorrentino and Pilcher have each reported a complete recovery. Orecchia experimented on 8 dogs and found that none of them showed evidences of gangrene after ligature of the femoral artery and vein supplemented in some of the animals by ligature of several other vessels in the vicinity and even by extensive venesection. Dogs are evidently much more resistant than man to such procedures, and it is possible that the vessels tolerate the procedures better in some persons than in others.

83. **Operative Treatment of Varicocele.**—Parona's method has been applied in 41 cases and the results have been perfectly satisfactory in all, with no further necessity for a suspensory. In mild cases, not causing pain nor other disturbance, a suspensory is all that is needed, but when symptoms demand more active treatment, the Parona method is regarded as superior to all others by Viscontini. The testicle is detached from the vaginalis; the enlarged veins are buried in the turned over vaginalis, and the latter is fastened at the outlet of the inguinal canal. The technic was worked out on animals and the remote results examined before it was tried in the clinic—all the evidence being in its favor. The patients can be dismissed in fifteen days. The details of the intervention were published in a previous communication in the *Policlinico*, VI, 1899.

88. **Formaldehyd Test for Albumin in Urine.**—Introna has found that formaldehyd causes the coagulation of albumin in solution and recommends a new test for albuminuria based on this fact. He adds 1 c.c. of formaldehyd to 56 c.c. of urine. If it is free from albumin the fluid remains clear, but in the presence of albumin it becomes turbid and a flocculent precipitate is gradually deposited consisting entirely of the albumin. The test can be hastened by heating to boiling point, in which case the precipitate is deposited without delay. For quantitative estimation by weight he adds 20 c.c. of formalin to 100 c.c. urine and heats for half an hour in the water bath, concluding by the technic of the Scherer test. He also asserts that formol may be substituted for the Esbach reagent in quantitative clinical diagnosis. He tabulates the results of various tests of solutions of albumin of known concentration, comparing them with the results obtained with the formalin. In every instance the exact proportion known to exist was

reproduced with the latter, while the results of boiling and adding acetic acid were always a little below the correct figure.

92. **Kerato-Conjunctivitis Consecutive to Articular Rheumatism.**—Ortale's patient was a healthy man of 30 who passed through a typical attack of articular rheumatism. Some of the joint symptoms have recurred in a mild form occasionally during the months since, and accompanied each time by symptoms of circumscribed kerato-conjunctivitis, which disappear with the joint symptoms.

96. **Functional Heart Affections.**—In the 2 cases reported in detail by Amantini the syndrome was evidently that of a cardiac neurosis in exceptionally nervous subjects. Although exclusively functional, yet the severity of the attacks is liable to induce some dangerous complication, or to entail organic disease in time, some valvular defect or myocarditis, myocardiac insufficiency or general arteriosclerosis. These possible dangers must be borne in mind by the physician and he should aim to keep the digestive tract in good condition and induce such patients to refrain from nervous strain of all kinds. Medicines to act on the heart are useless and even dangerous; the main reliance must be on the avoidance of the inciting causes of the neurosis.

Riforma Medica, Palermo.

98 (XIX, No. 39.) Di una streptothrix isolata dal sottosuolo. P. L. Pellegrino (Messina).
99 *Osservazioni cliniche, batteriologiche, ematologiche ed istologiche sul pemfigo cronico. T. Secchi and A. Serra. (Concluded.)
100 Le iniezioni di olio iodato nella tubercolosi chirurgica. C. Mastri.
101 (No. 40.) Importanza della citasi (enzima cellulare), prodotta artificialmente nell' organismo, nelle infezioni sperimentali. N. Pane.
102 Bactericidal Properties of Rabbit Blood Postmortem. C. Cafiero.—Ricerche sulle modificazioni del potere battericida del sangue post mortem nei conigli.
103 *Rapid Method of Detecting Vegetable Poisons. E. Di Mattei (Catania).—Di un metodo rapido per la ricerca dei veleni vegetali in tossicologia forense.
104 Sul valore disinfettante dei vapori d'alcool. P. Satta.

99. **Chronic Pemphigus.**—Secchi's patient was a woman with evidences of malarial cachexia, who entered the clinic on account of recurring attacks of a febrile bullous eruption with the clinical morphology of chronic pemphigus. A staphylococcus aureus was cultivated from the blood which produced merely transient fever and emaciation in a rabbit after intravenous inoculation. From one of the bullæ a streptococcus and staphylococcus aureus were derived which proved fatal for a rabbit in eleven days in intravenous injection. Abscesses were found in the kidney. He explains the case as chronic pemphigus caused by a staphylococcic septicemia consecutive to malaria.

103. **Rapid Method of Detecting Vegetable Poisons in Animal Tissues.**—Di Mattei announced last year that it was possible to determine the nature of some poisons by the characteristic differences exhibited by the precipitates after treatment with Bouchardat's reagent. He now reports that the tissues of animals killed by ingestion of a vegetable alkaloid poison exhibit the same characteristic precipitate reaction as the pure poison alone. Consequently it will be possible to detect poisons in the viscera in forensic cases by this simple test. He cites the peculiarities of each precipitate as observed in extracts of tissues of animals poisoned with strychnin, brucin, veratrin or morphin, etc. Control tests confirmed the specific and differential value of the aspect, color, etc., of the precipitates in the case of each poison. The response to the test was as perfect in tissues from animals that had been dead for five days as in the fresh cadavers. He proceeds by digesting the specimen with alcohol for twelve hours or with water slightly acidulated with tartaric acid, then filtering and evaporating the alcohol. He then adds a little water and induces precipitation with the Bouchardat reagent, concluding by extracting the alkaloid from the precipitate with baryta water to confirm its identity. By this technic it is possible to detect and identify a vegetable alkaloid poison in the tissues in less than two days. [The Bouchardat reagent for alkaloids is a mixture of 10 parts iodin and 20 parts potassium iodid in 500 parts water.—ED.]

Books Received.

Acknowledgment of all books received will be made in this column, and this will be deemed by us a full equivalent to those sending them. A selection from these volumes will be made for review, as dictated by their merits, or in the interests of our readers.

MODERN METHODS IN THE SURGERY OF PARALYSES. With Special Reference to Muscle-Grafting, Tendon-Transplantation and Arthrodesis. By A. H. Tubby, M.S. Lond., F.R.C.S. Eng., Surgeon to, and Lecturer on Clinical and Orthopedic Surgery, and in Charge of the Orthopedic Department at Westminster Hospital; and Robert Jones, F.R.C.S.E., Honorary Surgeon to the Royal Southern Hospital, Liverpool. Illustrated by 93 Figures and 58 Cases. Cloth. Pp. 311. Price, $3.25. London: Macmillan & Co. New York: The Macmillan Company. 1903.

AN ATLAS OF HUMAN ANATOMY. For Students and Physicians. By Carl Toldt, M.D., Professor of Anatomy in the University of Vienna. Assisted by Alois Dalla Rosa, M.D. Translated from the Third German Edition and Adapted to English and American and International Terminology. By M. Eden Paul, M.D. Brux., M.R.C.S., L.R.C.P. First Section. A. The Regions of the Human Body. B. Osteology. (Figures 1 to 377 and Index.) Cloth. Pp. 161. Price, $2.50. New York: Rebman Company. 1903.

PRACTICAL GYNECOLOGY. A Comprehensive Text-Book for Students and Physicians. By E. E. Montgomery, M.D., LL.D., Professor of Gynecology, Jefferson Medical College. Second Revised Edition. With 539 Illustrations, the Greater Number of Which Have Been Drawn and Engraved Especially for This Work, for the Most Part from Original Sources. Cloth. Pp. 900. Price, $5.00 net. Philadelphia: P. Blakiston's Son & Co. 1903.

THE FOUR EPOCHS OF WOMAN'S LIFE. Maidenhood, Marriage, Maternity, Menopause. By Anna M. Galbraith, M.D., Author of "Hygiene and Physical Culture for Women," Fellow of the New York Academy of Medicine. With an Introductory note by John H. Musser, M.D., Professor of Clinical Medicine, University of Pennsylvania. Cloth. Pp. 247. Price, $1.50 net. Philadelphia, New York, London: W. A. Saunders & Co. 1903.

GRUNDRISS DER AUGENHEILKUNDE. Von Dr. Charles H. May, Chef der Augenklinik, Med. Abteilung, Columbia Universitat, New York. Autorisierte deutsche Ausgabe für deutsche Studierende und Aerzte bearbeitet von Dr. E. H. Oppenheimer, Augenarzt in Berlin. Mit 13 Farbendrucktafeln (36 Figures) und 191 Textabbildungen. Cloth. Pp. 344. Berlin: Verlag von August Hirschwald.

DANGEROUS COMMUNICABLE DISEASES. How Spread, How Restricted and Prevented. Data and Statements Supplied to School Superintendents and Teachers, by the Michigan State Board of Health, in Compliance with Act No. 146, Laws of 1895. (Fourteenth Edition, August, 1903, 30,000; 203,000 Printed.) Paper. Lansing, Mich.: Robert Smith Printing Co.

MODERN SURGERY, General and Operative. By John Chalmers DaCosta, M.D., Professor of the Principles of Surgery and of Clinical Surgery in the Jefferson Medical College, Philadelphia. With Over 700 Illustrations, Some in Colors. Cloth. Pp. 1099. Price, $5.00 net. Philadelphia, New York, London: W. B. Saunders & Co. 1903.

A MANUAL OF THE PRACTICE OF MEDICINE. By A. A. Stevens, A.M., M.D., Professor of Pathology in the Woman's Medical College of Pennsylvania. Sixth Edition, Thoroughly Revised, Enlarged and Reset. Illustrated. Flexible Leather. Pp. 556. Price, $2.25 net. Philadelphia, New York, London: W. B. Saunders & Co. 1903.

A MANUAL OF HYGIENE AND SANITATION. By Seneca Egbert, M.D., Professor of Hygiene in the Medico-Chirurgical College of Philadelphia. New Third Edition, Enlarged and Thoroughly Revised. With 86 Illustrations. Cloth. Pp. 467. Price, $2.25 net. Philadelphia and New York: Lea Brothers & Co.

A MANUAL FOR STUDENTS AND PHYSICIANS. By Henry E. Hale, A.M., M.D., Assistant Demonstrator of Anatomy, College of Physicians and Surgeons (Columbia University), New York. With 71 Illustrations. Cloth. Pp. 384. Price, $1.00 net. Philadelphia and New York: Lea Brothers & Co. 1903.

MAMMALIAN ANATOMY. With Special Reference to the Cat. By Alvin Davison, Ph.D., ex-Fellow of Princeton University. With Over 100 Illustrations, Made by W. H. Reese, A.M., from the Author's Dissections. Cloth. Pp. 250. Price, $1.50. Philadelphia: P. Blakiston's Son & Co. 1903.

PROCEEDINGS AND ADDRESSES OF THE SIXTH GENERAL CONFERENCE OF THE HEALTH OFFICIALS IN MICHIGAN, Ann Arbor, Mich., Jan. 15 and 16, 1903. Under the Auspices of the State Board of Health. Paper. Pp. 106. Lansing, Mich.: Robert Smith Printing Co. 1903.

NOSE AND THROAT WORK FOR THE GENERAL PRACTITIONER. By George L. Richards, M.D., Fellow American Laryngological, Rhinological and Otological Society. Cloth. Pp. 330. Price, $2.00. Published by International Journal of Surgery Company, N. Y.

MANUAL OF MEDICINE. By Thomas Kirkpatrick Monro, M.A., M.D., Fellow of, and Examiner to, the Faculty of Physicians and Surgeons, Glasgow. Cloth. Pp. 901. Price, $5.00. Philadelphia and New York: W. B. Saunders & Co.

PSYCHOTHERAPY in the Practice of Medicine and Surgery. By Sheldon Leavitt, M.D. Cloth. Pp. 247. Price, $2.00. Chicago: Gardner-Taylor Press. 1903.

PHYSICIAN'S POCKET ACCOUNT BOOK. By J. J. Taylor, M.D. Leather. Pp. 200. Price, $1.00. Philadelphia: Published by the Medical Council.

THE PUBLIC SERVICE.

[For the benefit of the members of the medical departments of the Army, Navy, etc., this department will hereafter appear near the center of the reading pages, to allow the publication of each report one week earlier. The first and last pages of THE JOURNAL go to press before those in the center.]